Epidemiology of Attention-Deficit/Hyperactivity Disorder : National and State-Based Patterns and Opportunities for Policy Evaluation

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ADHD Symposium, Baton Rouge, LA

National Center on Birth Defects and Developmental Disabilities
Division of Human Development and Disabilities

Attention-Deficit/Hyperactivity Disorder
Diagnostic Criteria

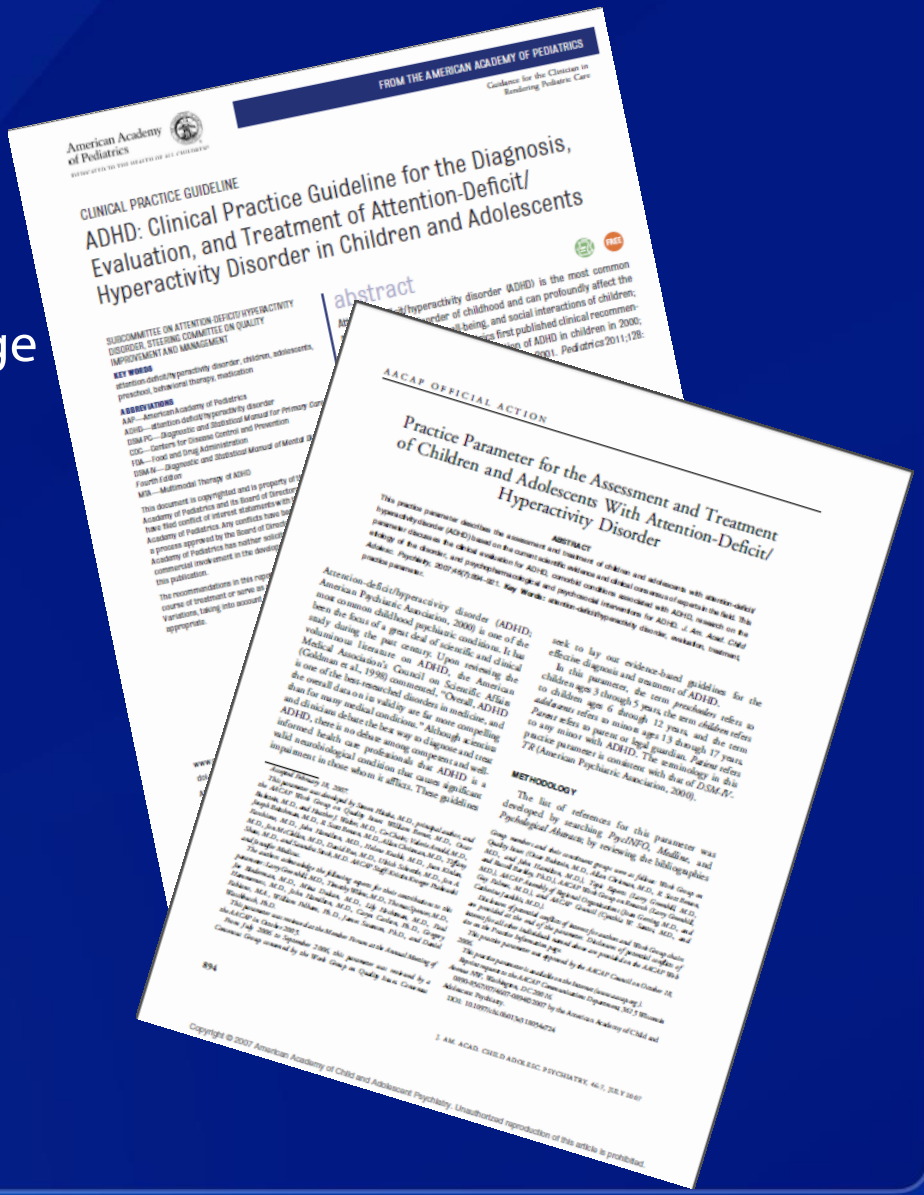
The Gold Standard: ***Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5)***

- **Symptom Count (6 or more; 5 or more for 17+)**
  - Inattention and/or Hyperactivity
  - Presentations (subtypes): Inattentive, Hyperactive, Combined
- **Age of Onset (symptoms before age 12)**
- **Impairment (significant)**
- **Pervasiveness (multiple settings)**
- **Rule-Outs**

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders -5* Washington, DC: APA.

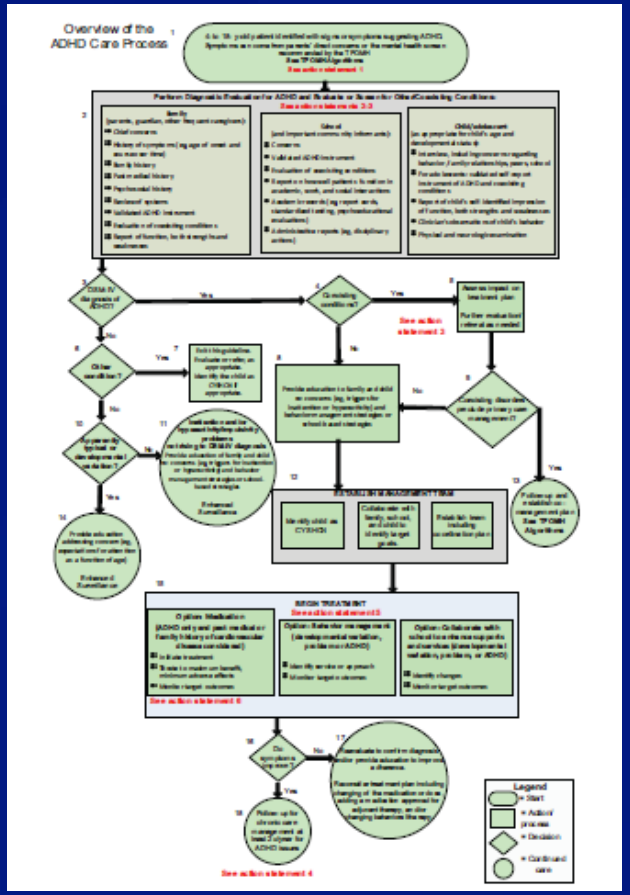
Practice Guidelines from Professional Academies

- AAP Diagnostic and Treatment Guidelines
  - Recommendations and special considerations, by age
  - ADHD Process of Care Algorithm
- AACAP Diagnostic and Treatment Guidelines



AAP Guidance on Diagnosis and Management

- ADHD evaluation for any child (4-18) who presents with academic or behavioral problems and symptoms of inattention, hyperactivity, or impulsivity
- Assess with *DSM* criteria
  - Symptoms and impairment in more than 1 major setting
  - Information should be obtained from parents or guardians, teachers, and other school and mental health clinicians involved in the child's care
  - Clinician should rule out alternative causes
- Clinician should assess comorbidities
- Clinician should recognize ADHD as a *chronic* condition

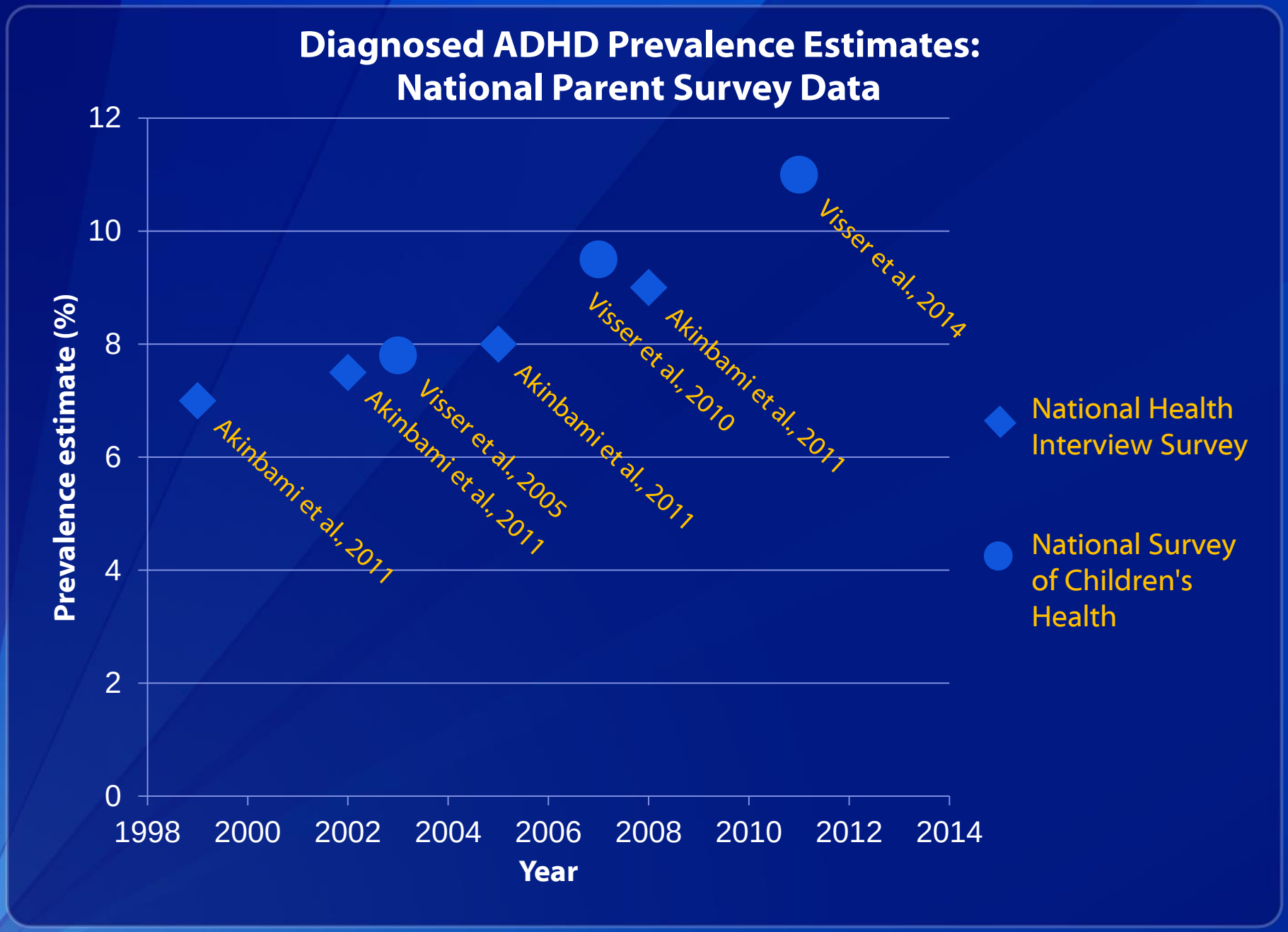


AAP's Subcommittee on Attention-Deficit/Hyperactivity Disorder Steering Committee on Quality Improvement and Management. ADHD: Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. *Pediatrics*. November 1, 2011 2011;128(5):1007-1022.

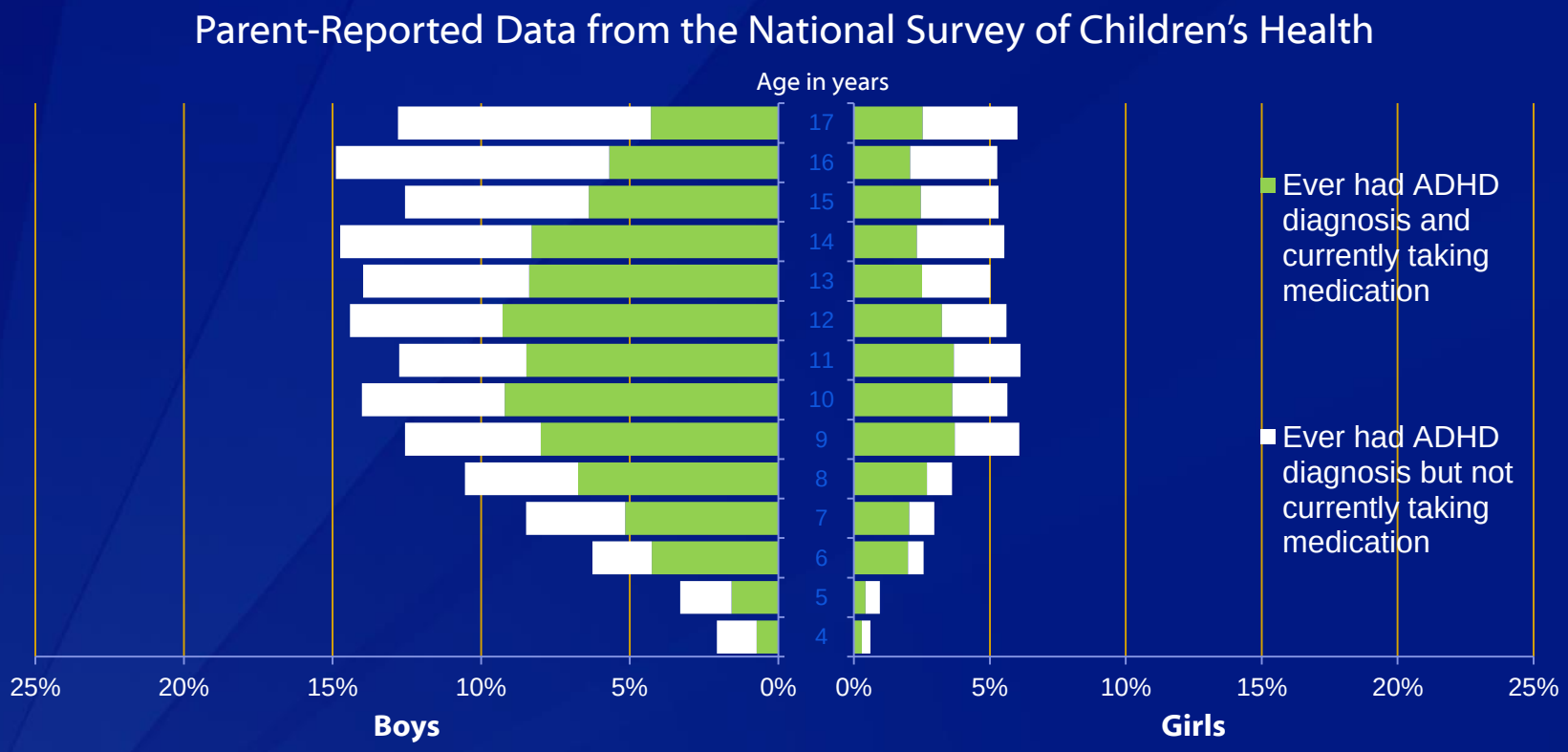
Prevalence of ADHD among School-Aged Youth:
National Survey of Children's Health

- **2011-12 National Population Estimates**
  - 6.4 million youth 4-17 years ever diagnosed
    - 2 million more than in 2003
  - 5.1 million with a current ADHD diagnosis
  - 3.5 million taking medication for ADHD
    - 1 million more than in 2003
- **2011-12 National Prevalence Rate (%)**
  - 11% of youth 4-17 years of age ever diagnosed
    - Up from 7.8% in 2003-2004; a 42% increase (~5% per year)
  - 8.8% with a current diagnosis
  - 6.1% taking medication for ADHD
    - Up from 4.8% in 2003; a 28% increase since 2007 (~7% per year)

Visser, S. N., Danielson, M. L., Bitsko, R. H., Holbrook, J. R., Kogan, M. D., Ghandour, R. M., . . . Blumberg, S. J. (2014). Trends in the Parent-Report of Health Care Provider-Diagnosed and Medicated Attention-Deficit/Hyperactivity Disorder: United States, 2003–2011. *Journal of the American Academy of Child and Adolescent Psychiatry, 53*(1), 34-46.e32.


Diagnosed ADHD Prevalence Estimates:
National Parent Survey Data
Prevalence estimate (%)
0
2
4
6
8
10
12
1998
2000
2002
2004
2006
2008
2010
2012
2014
Year
Akinbami et al., 2011
Akinbami et al., 2011
Visser et al., 2005
Akinbami et al., 2011
Visser et al., 2010
Akinbami et al., 2011
Visser et al., 2014
National Health Interview Survey
National Survey of Children's Health

Weighted Prevalence Estimates (%) of Attention-Deficit/Hyperactivity Disorder (ADHD) Diagnosis by a Health Care Provider among U.S. Children, by Age and Medication Status



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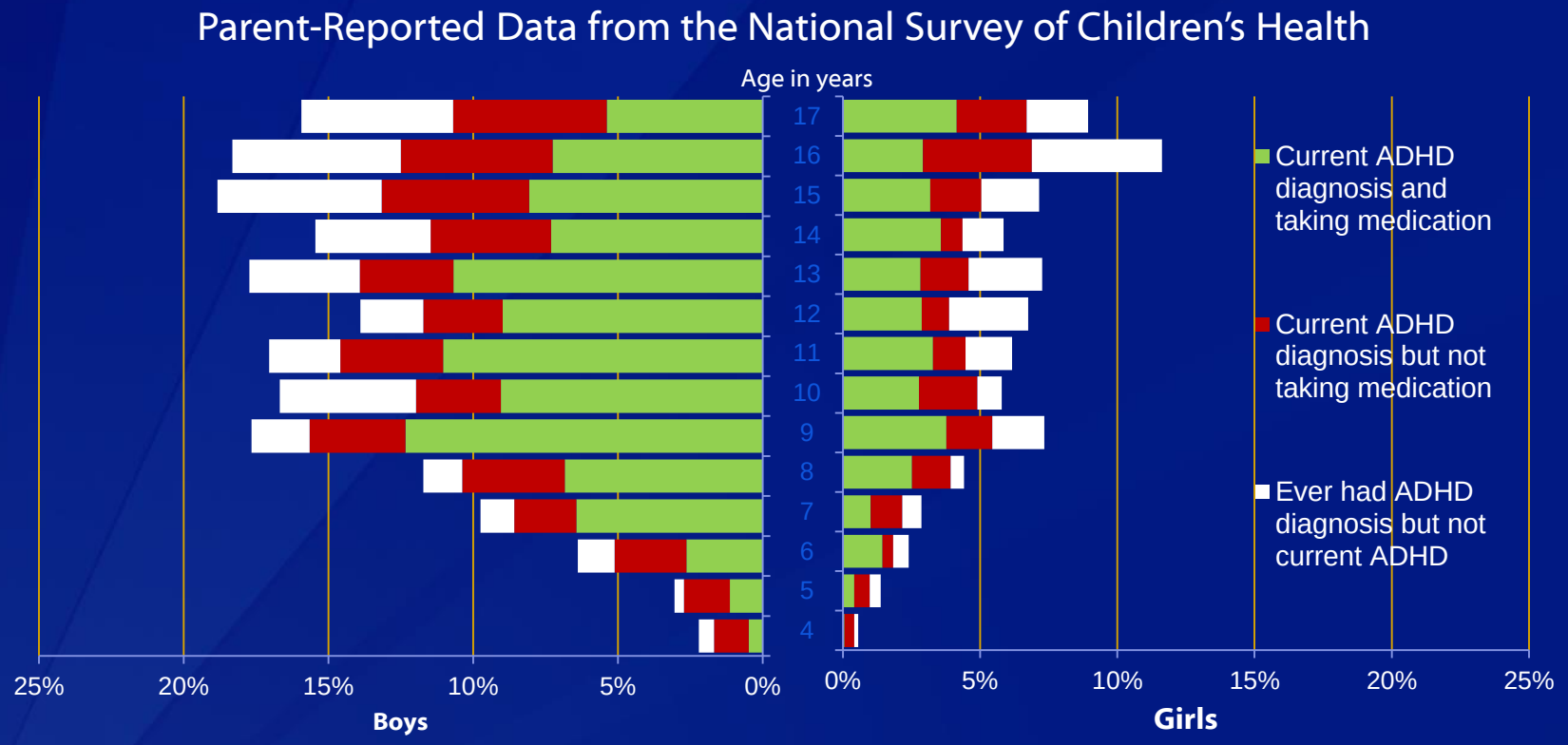
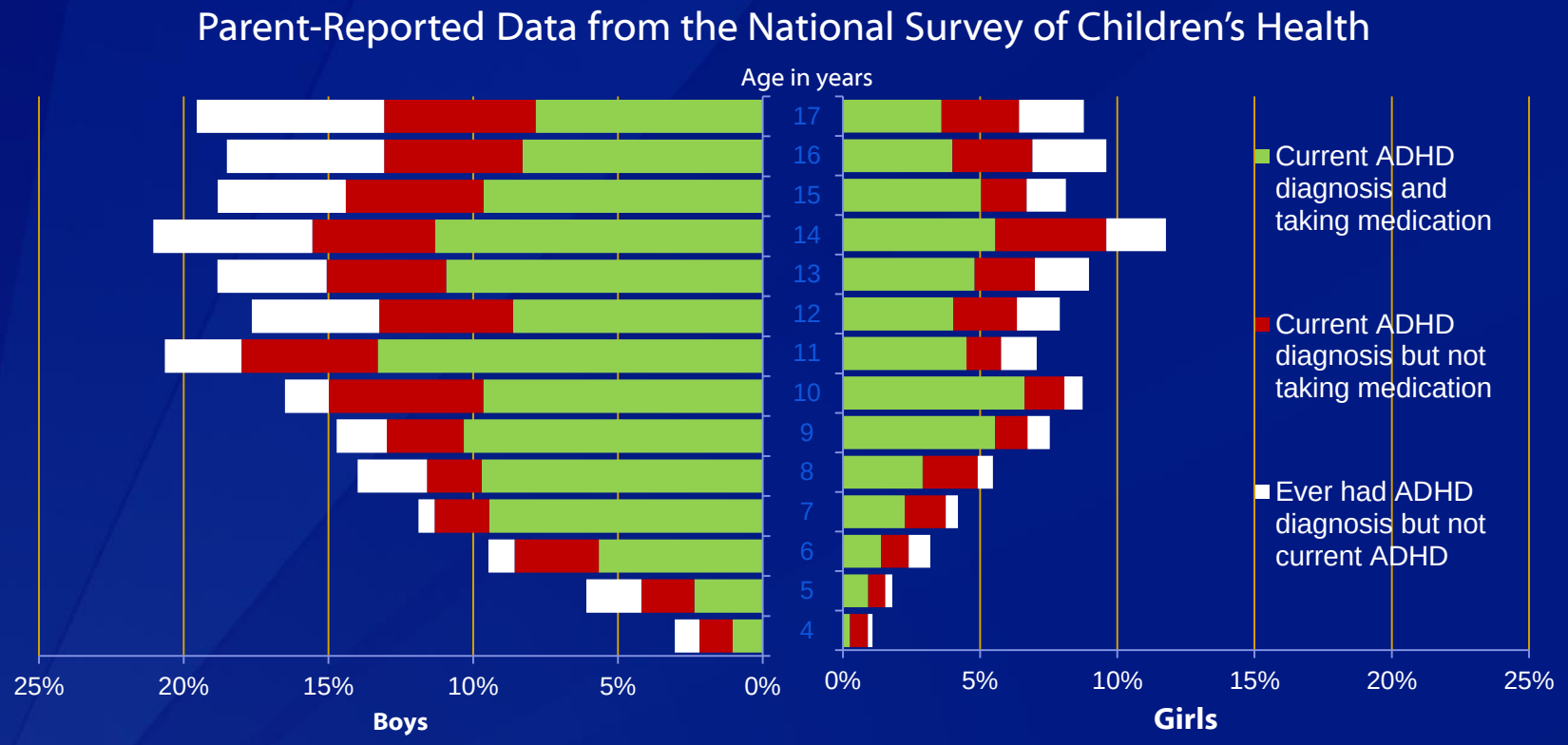


2007-2008

Visser, S. N., Danielson, M. L., Bitsko, R. H., Holbrook, J. R., Kogan, M. D., Ghandour, R. M., . . . Blumberg, S. J. (2014). Trends in the Parent-Report of Health Care Provider-Diagnosed and Medicated Attention-Deficit/Hyperactivity Disorder: United States, 2003–2011. *Journal of the American Academy of Child and Adolescent Psychiatry, 53*(1), 34-46.e32.

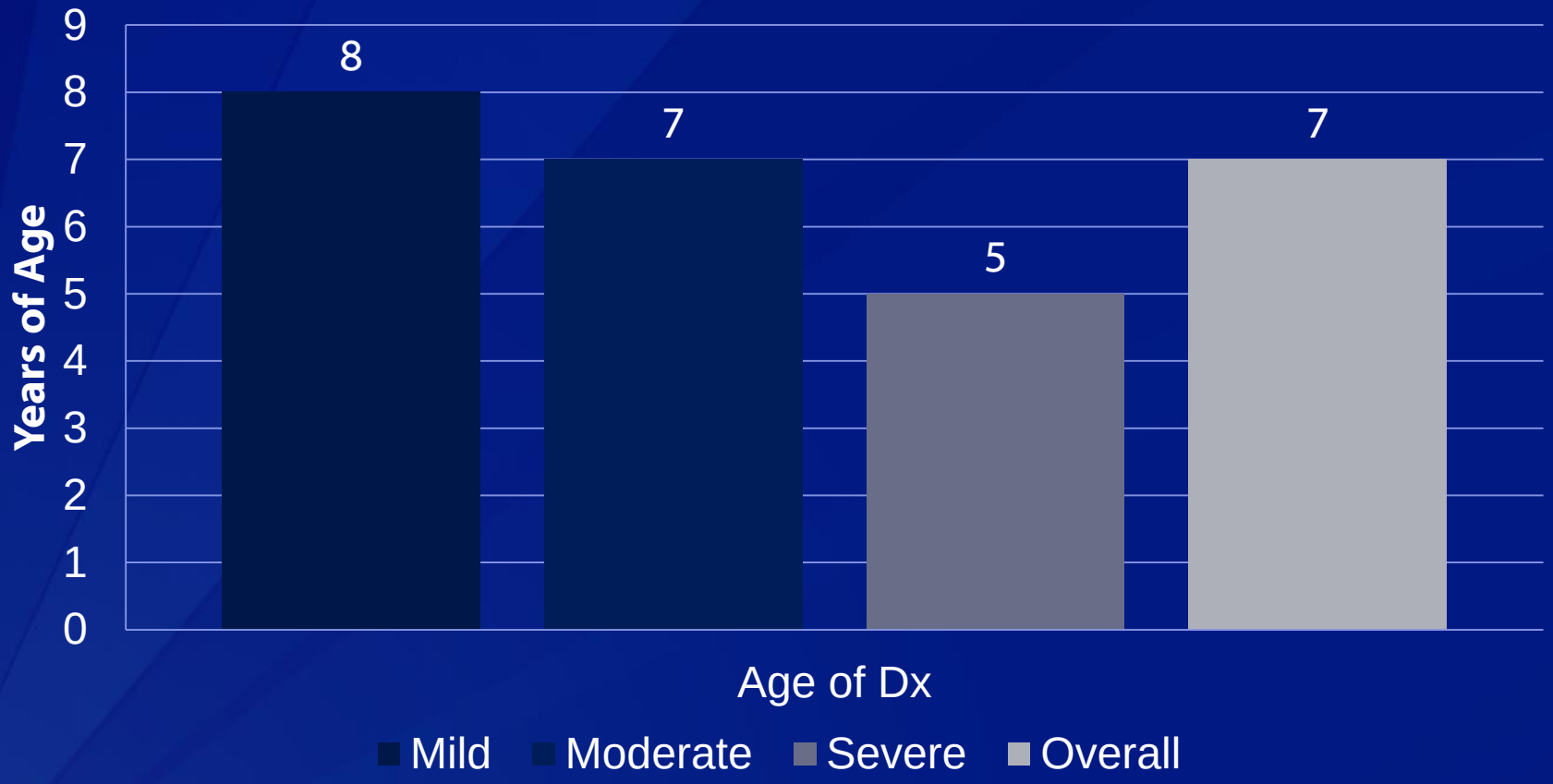
Weighted Prevalence Estimates (%) of Attention-Deficit/Hyperactivity Disorder (ADHD) Diagnosis by a Health Care Provider among U.S. Children, by Age and Medication Status



2011-2012

Visser, S. N., Danielson, M. L., Bitsko, R. H., Holbrook, J. R., Kogan, M. D., Ghandour, R. M., . . . Blumberg, S. J. (2014). Trends in the Parent-Report of Health Care Provider-Diagnosed and Medicated Attention-Deficit/Hyperactivity Disorder: United States, 2003–2011. *Journal of the American Academy of Child and Adolescent Psychiatry, 53*(1), 34-46.e32.

Age of Diagnosis by ADHD Severity Level: NSCH 2011-12



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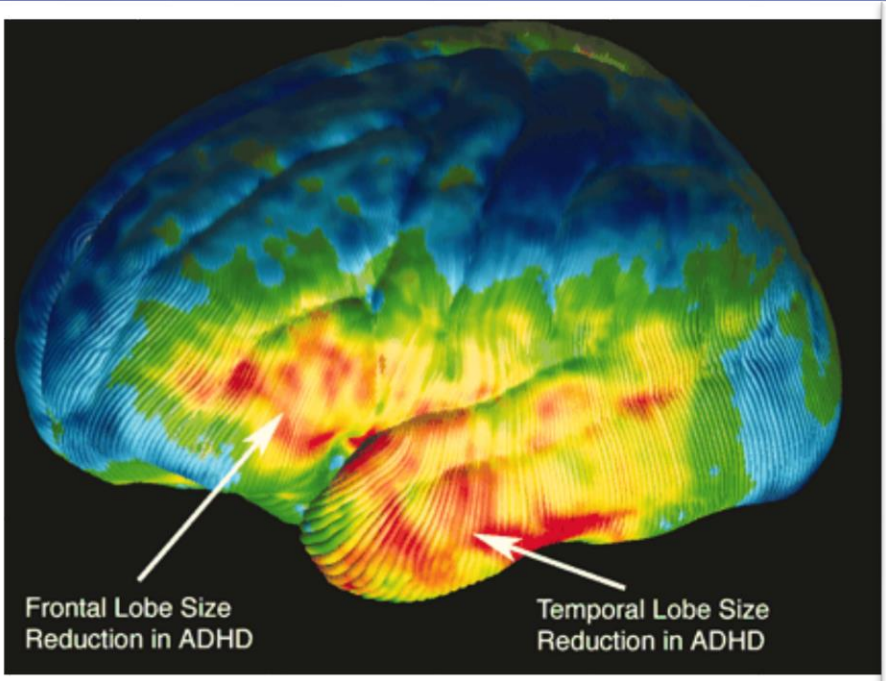
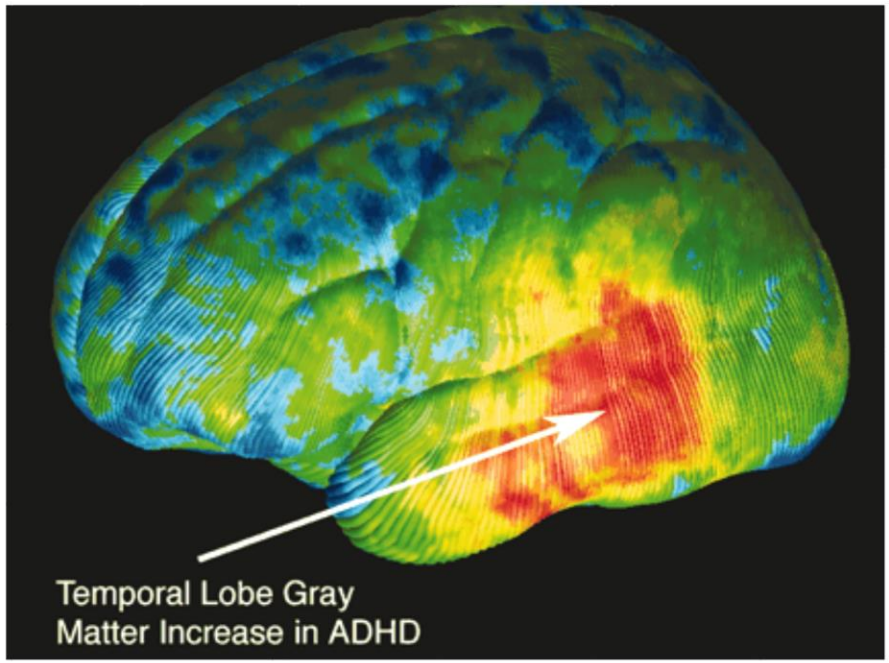




Anatomical Differences in Youth with ADHD

Sowell, E. R., Thompson, P. M., Welcome, S. E., Henkenius, A. L., Toga, A. W., & Peterson, B. S. (2003). Cortical abnormalities in children and adolescents with attention-deficit hyperactivity disorder. *Lancet, 362*(9397), 1699-1707.

Anatomical Differences in Youth with ADHD

- Evidence of a Developmental Delay in Brain Growth and Subsequent Cortical Pruning Process
  - Multiple brain-imaging scans of 234 children with ADHD and 231 normally developing children
  - Scans beginning at 10 years and continued until 17
  - Cortical pruning happened around 13 for normally developing kids, but not until almost 15 for kids with ADHD
- Conclusions
  - Some children will "outgrow" ADHD when brain development catches up
    - Impairment may be felt long-term
  - Some children will never catch up

Shaw, P., Malek, M., Watson, B., Sharp, W., Evans, A., & Greenstein, D. (2012). Development of cortical surface area and gyrification in Attention-Deficit/Hyperactivity Disorder. *Biological Psychiatry*, *72*(3), 191-197. doi: 10.1016/j.biopsych.2012.01.031

Persistence of ADHD Symptoms

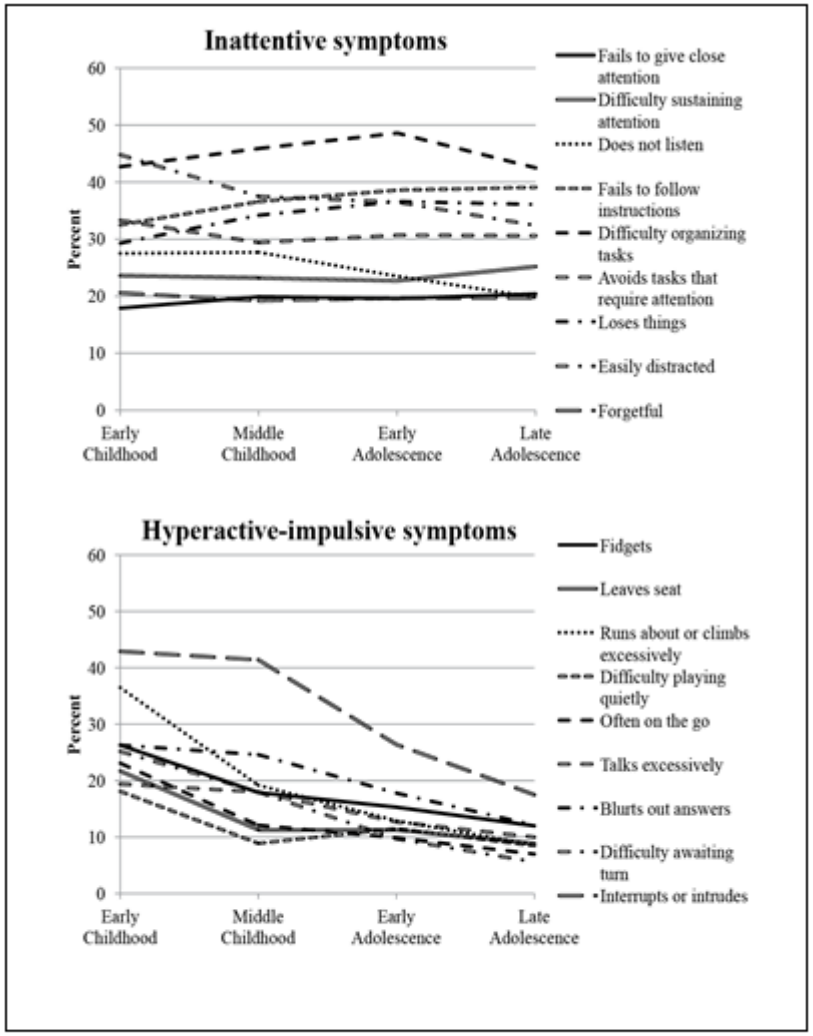
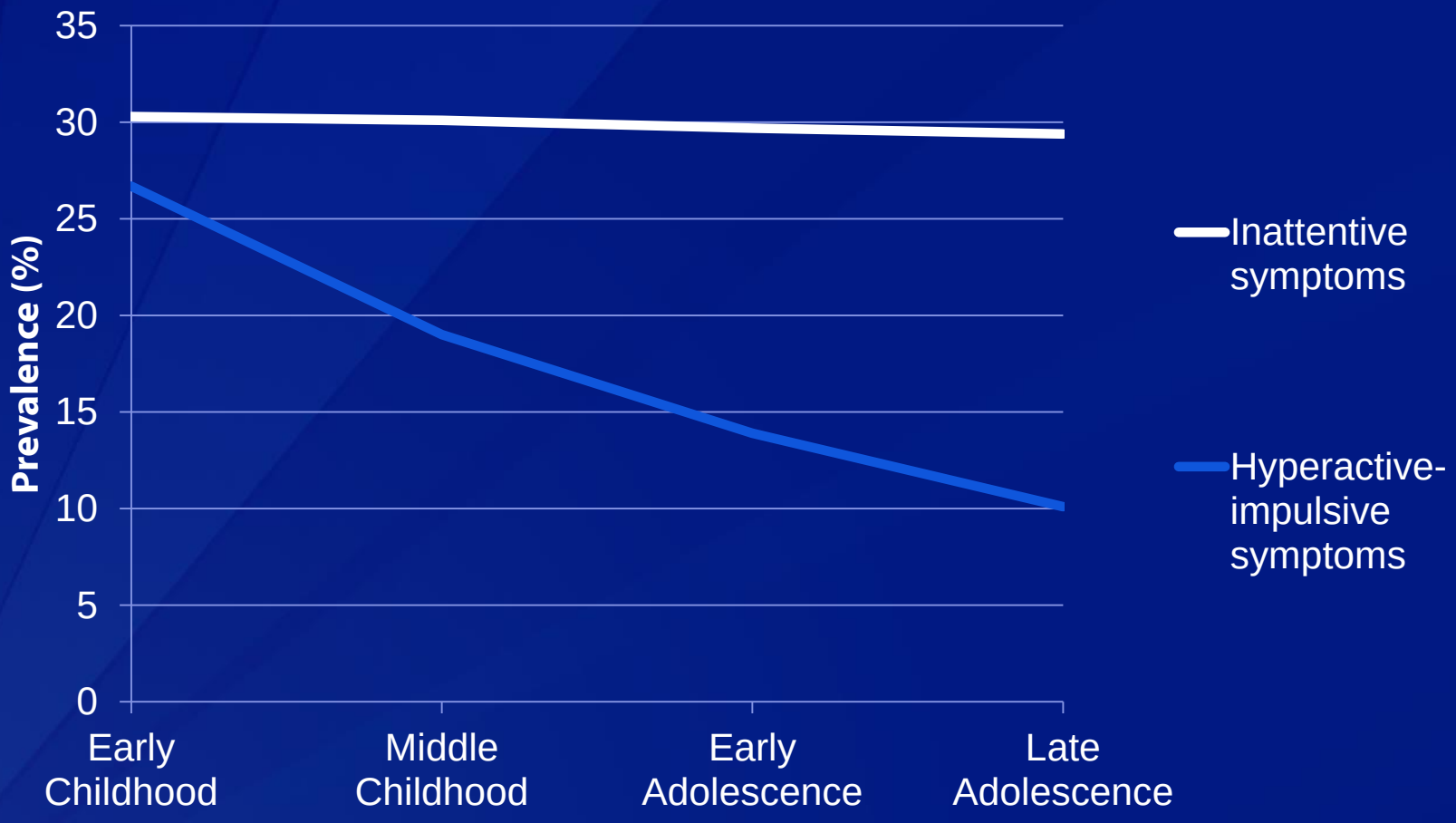


Figure 1. Prevalence of parent-reported ADHD symptoms by developmental stage.

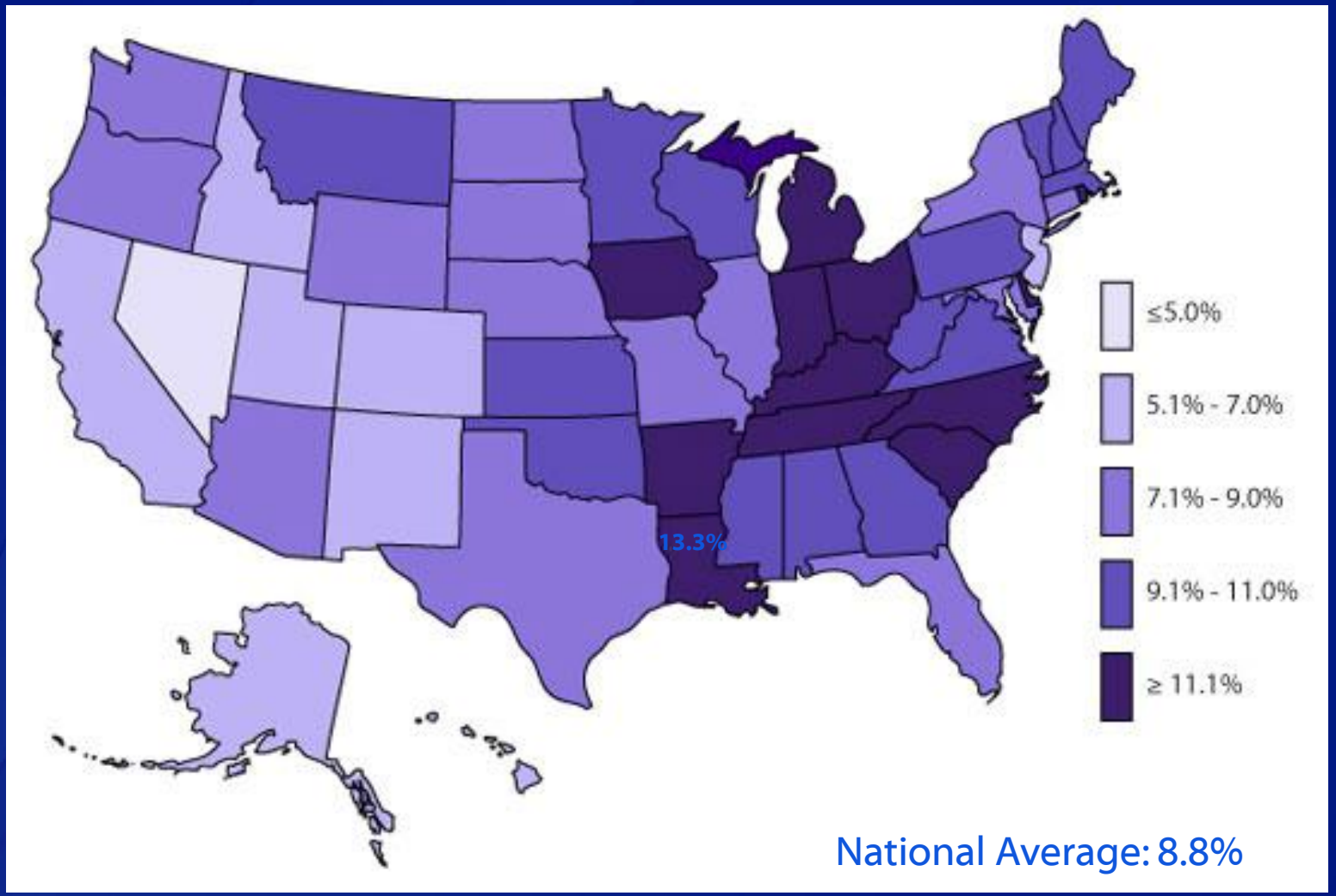
Holbrook, J. R., Cuffe, S. P., Cai, B., Visser, S. N., Forthofer, M. S., Bottai, M., . . . McKeown, R. E. (2014). Persistence of Parent-Reported ADHD Symptoms From Childhood Through Adolescence in a Community Sample. *J Atten Disord*. doi: 10.1177/1087054714539997

Average Prevalence of ADHD Symptoms by Developmental Stage



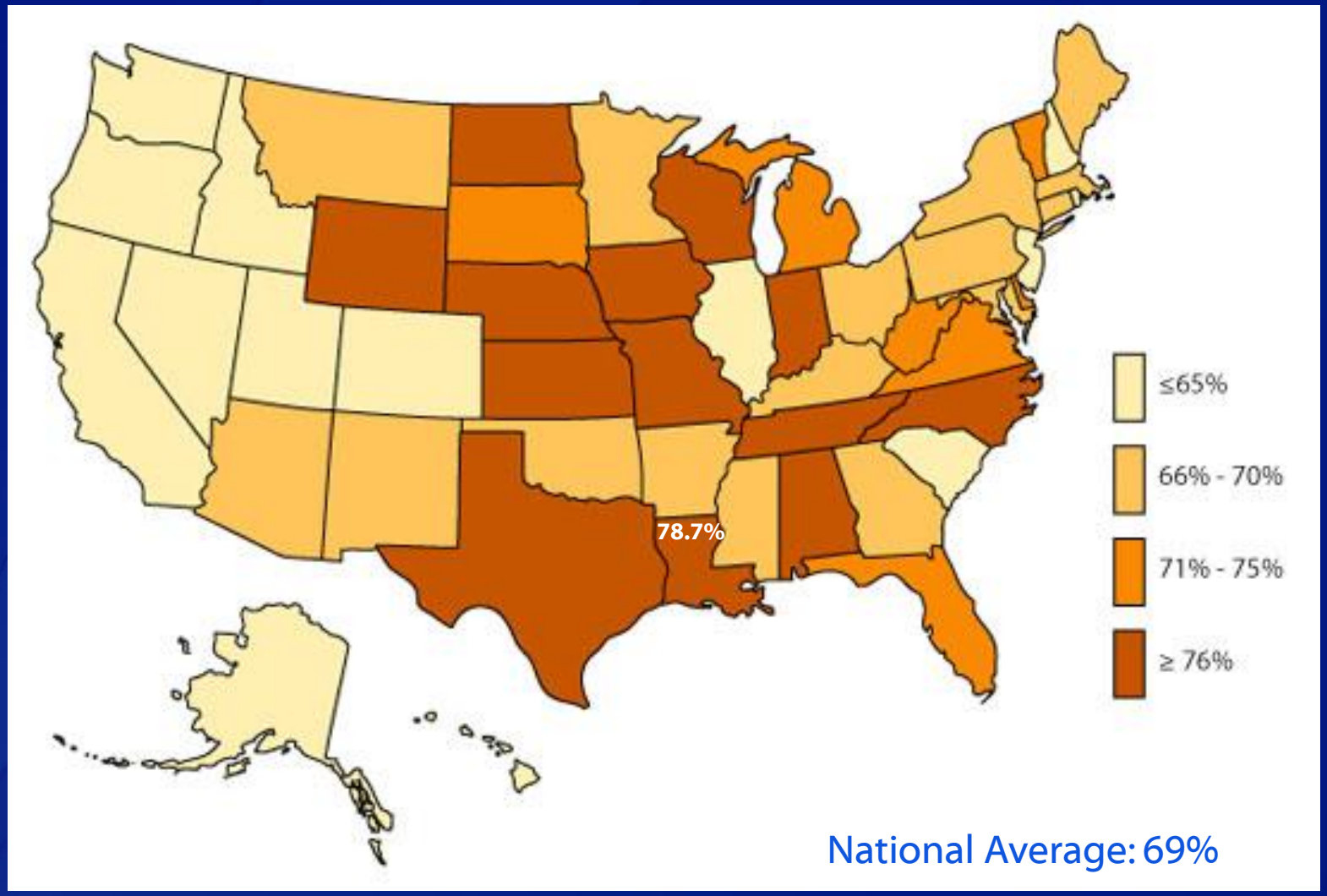
Holbrook, J. R., Cuffe, S. P., Cai, B., Visser, S. N., Forthofer, M. S., Bottai, M., . . . McKeown, R. E. (2014). Persistence of Parent-Reported ADHD Symptoms From Childhood Through Adolescence in a Community Sample. *J Atten Disord*. doi: 10.1177/1087054714539997

Current ADHD Diagnosis: NSCH, 2011-12



http://www.cdc.gov/ncbddd/adhd/prevalence.html

Current ADHD Medication Treatment: NSCH, 2011-12



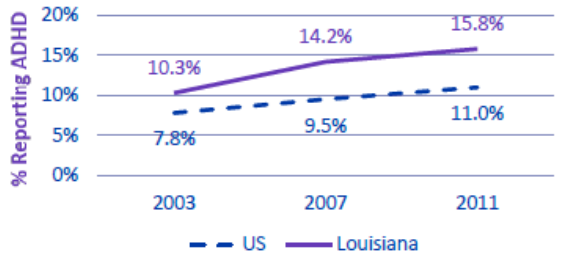
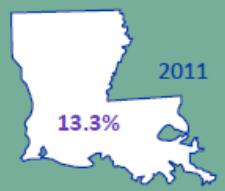
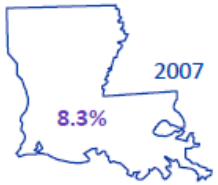
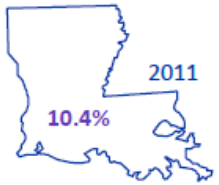
http://www.cdc.gov/ncbddd/adhd/medicated.html

A CLOSER LOOK AT LOUISIANA

State Profile: **Louisiana**

www.cdc.gov/adhd

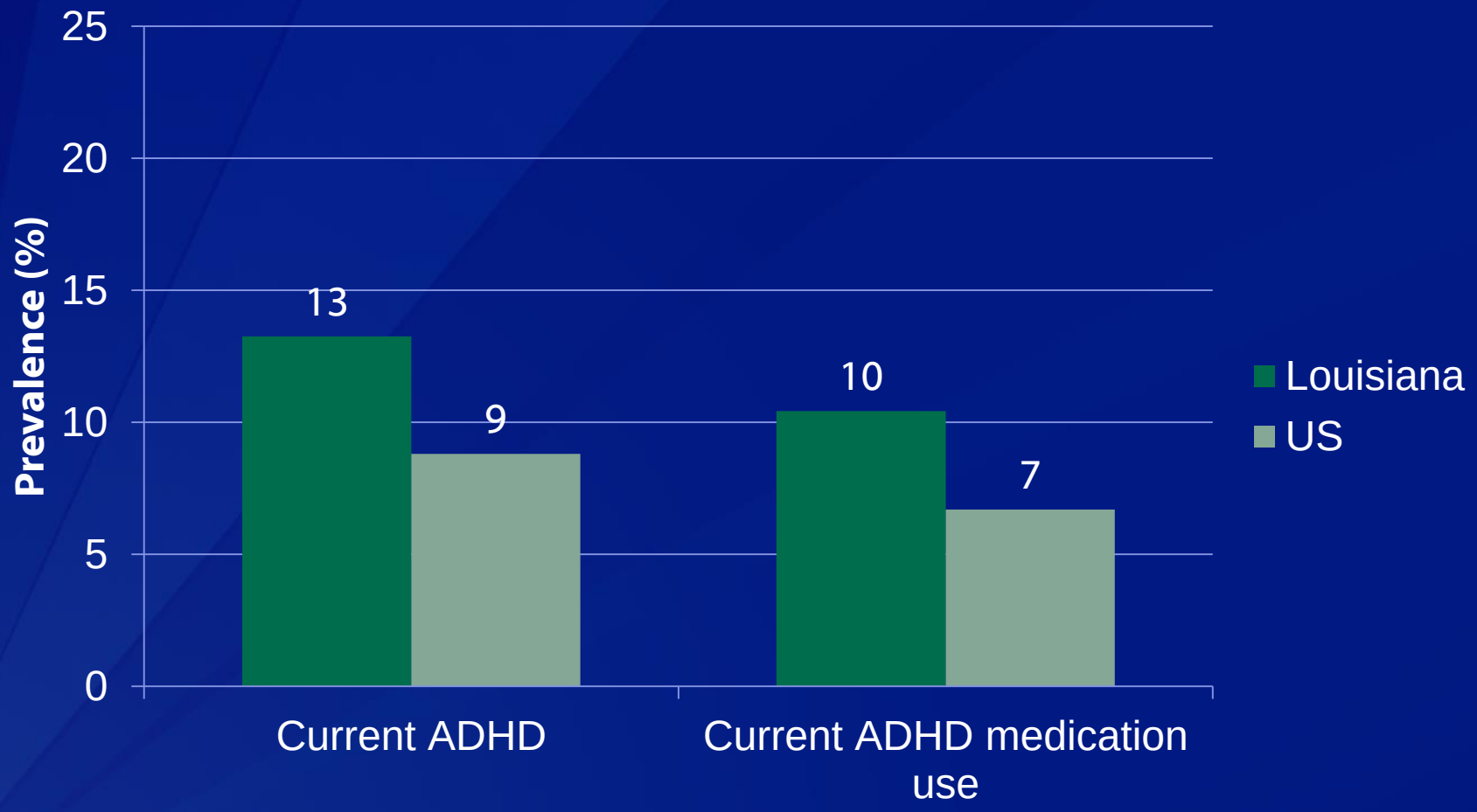
Parent-Reported Diagnosis of ADHD by a Health Care Provider and Medication Treatment Among Children 4-17 Years: National Survey of Children's Health* – 2003 to 2011

Survey Question	
Has a doctor or health care provider ***ever*** told you that your child had attention-deficit/hyperactivity disorder or attention deficit disorder (ADHD or ADD)?	
Does your child ***currently*** have ADHD or ADD?	In 2007, 7.2% of US children and 11.7% of children in Louisiana had ***current*** ADHD, by parent report.  Among all US states, Louisiana ranked 2nd highest.
	In 2011, 8.8% of US children and 13.3% of children in Louisiana had ***current*** ADHD, by parent report.  Among all US states, Louisiana ranked 3rd highest.
Is your child ***currently*** taking medication for ADHD or ADD?	In 2007, 4.8% of US children and 8.3% of children in Louisiana were taking medication for ADHD.  Among all US states, Louisiana ranked 2nd highest.
	In 2011, 6.1% of US children and 10.4% of children in Louisiana were taking medication for ADHD.  Among all US states, Louisiana ranked 1st highest.

* The National Survey of Children's Health is conducted by CDC and sponsored by the Maternal and Child Health Bureau, HRSA: www.cdc.gov/nchs/slaits/nsch.htm

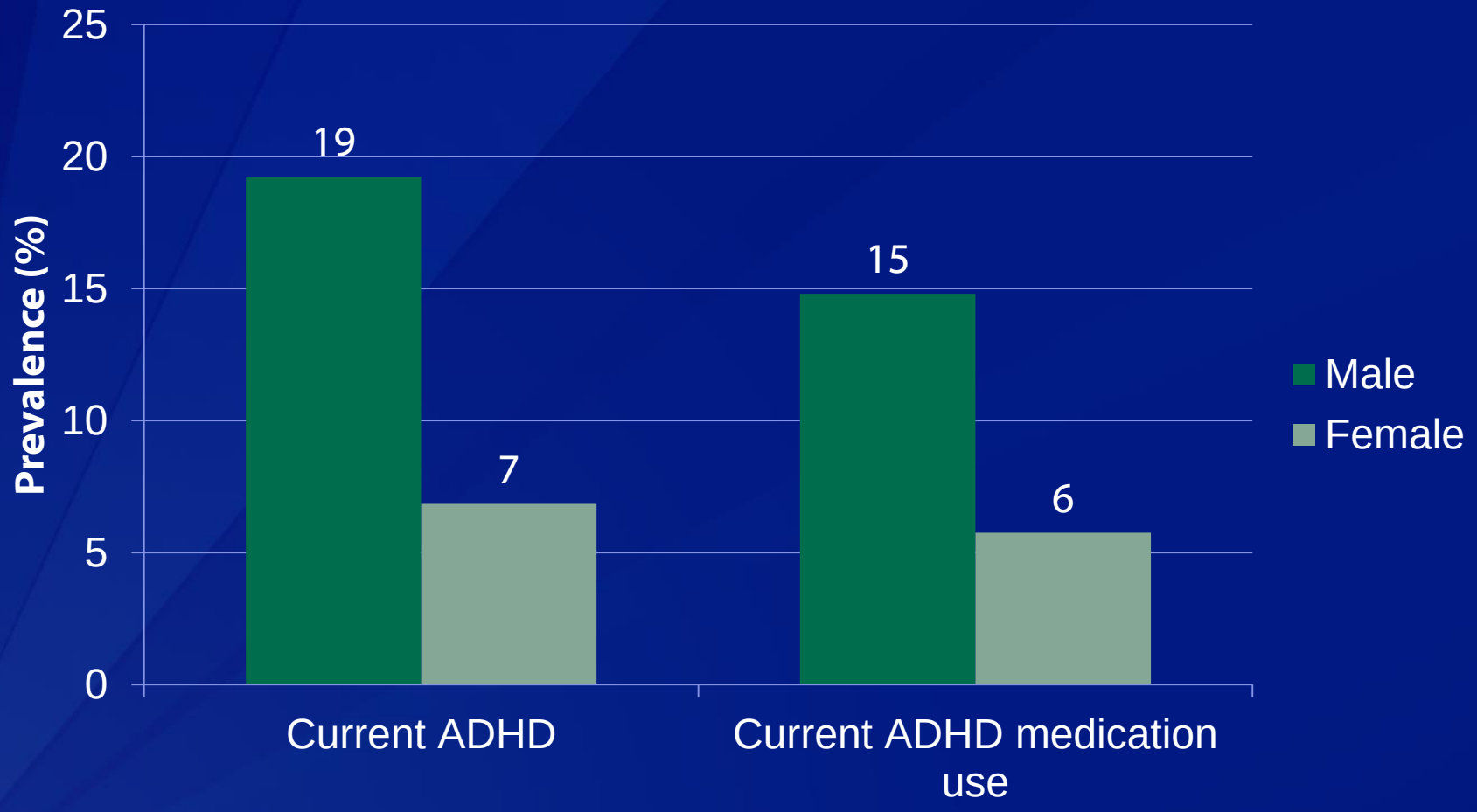
National Center on Birth Defects and Developmental Disabilities
Division of Human Development and Disability

National Survey of Children's Health: 2011-12



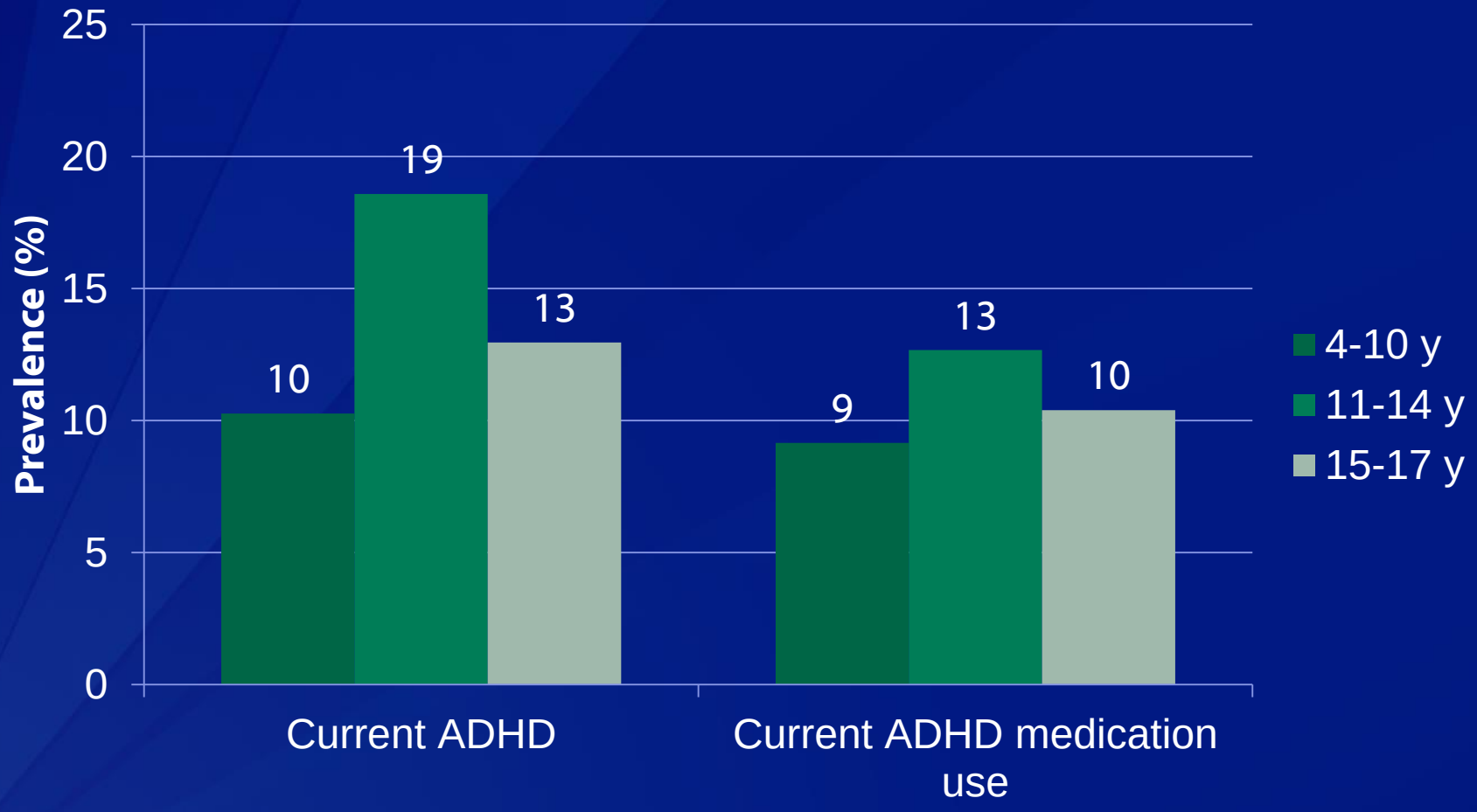
Louisiana: ADHD Indicators by Gender

National Survey of Children's Health: 2011-12



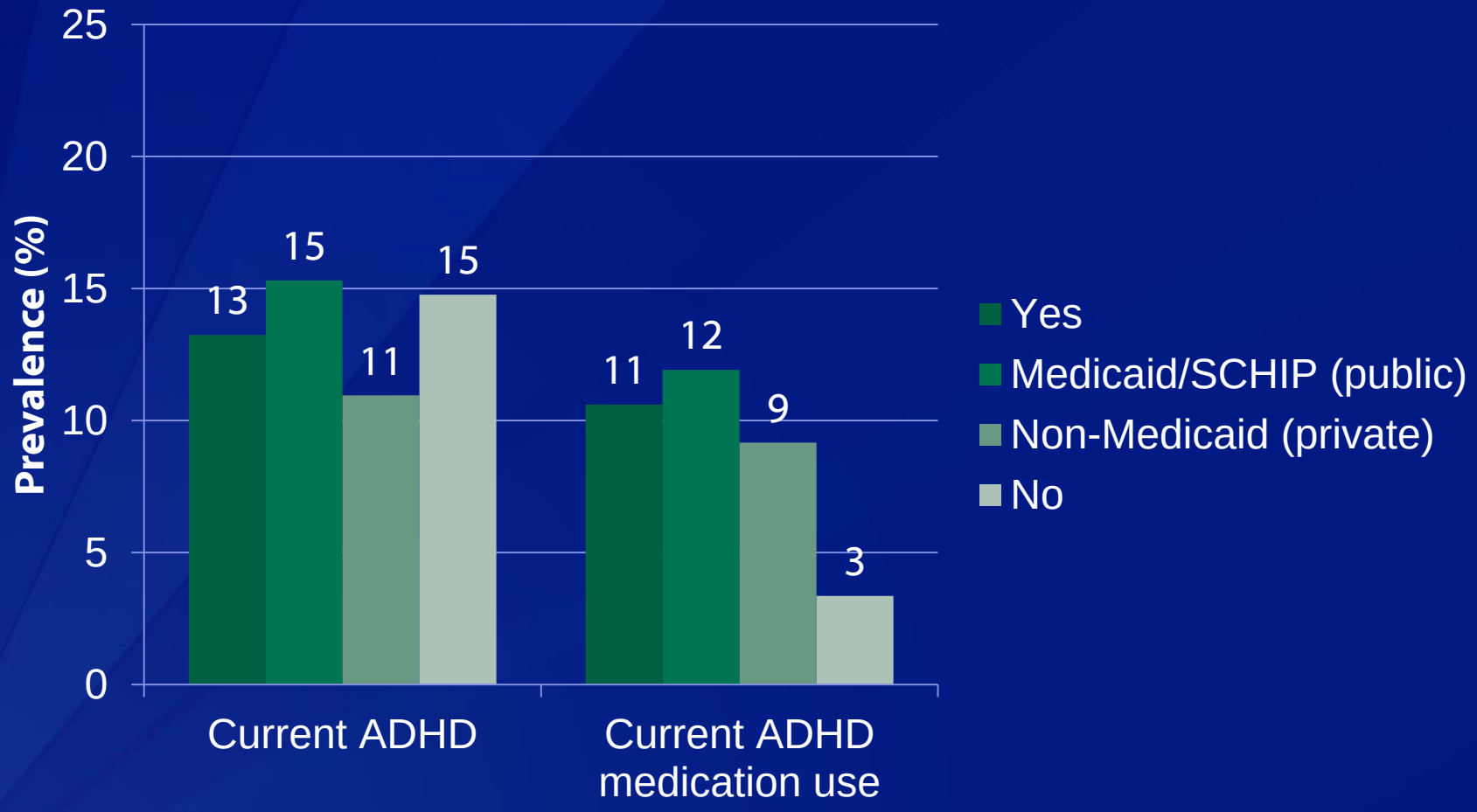
Louisiana: ADHD Indicators by Age

National Survey of Children's Health: 2011-12



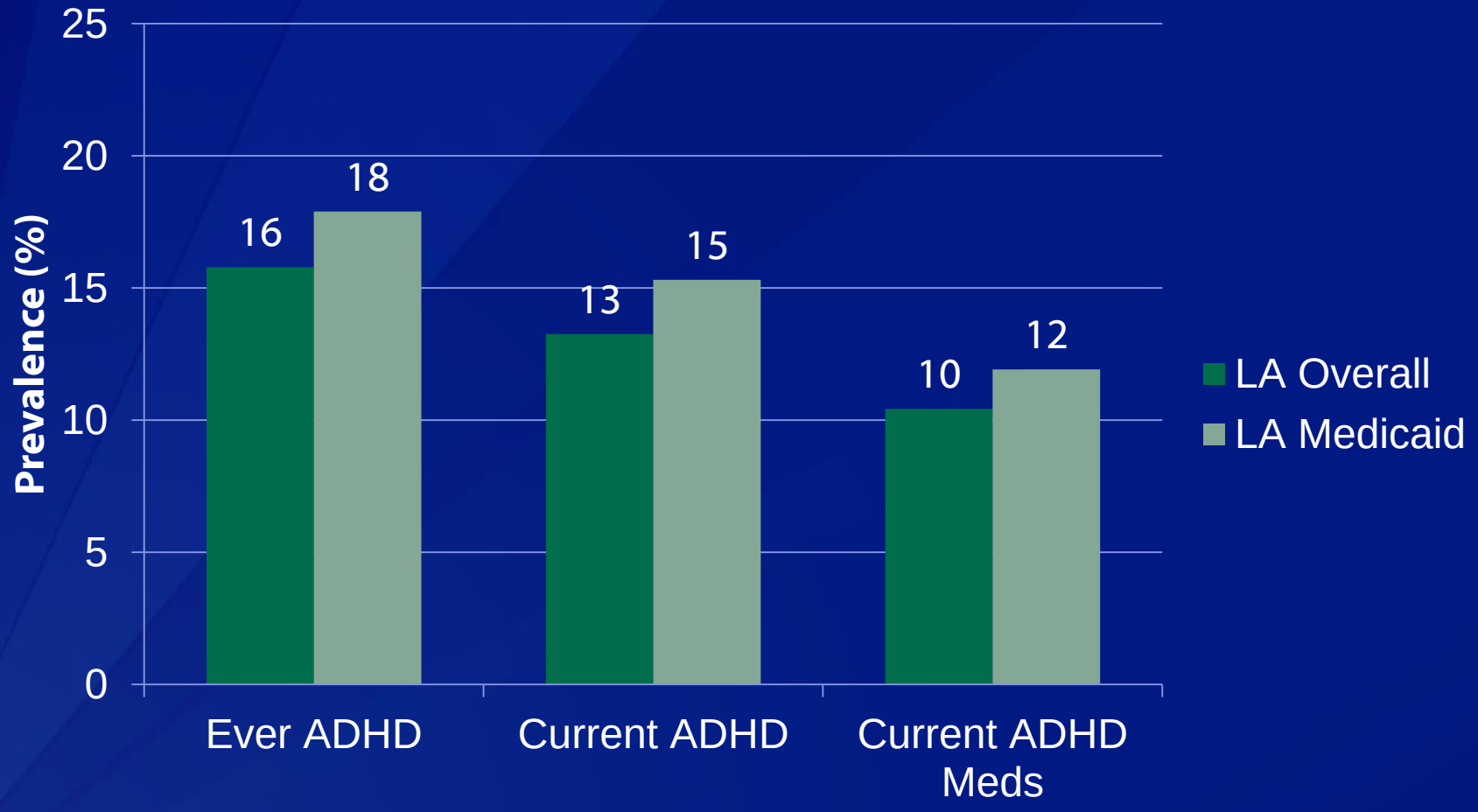
Louisiana: ADHD Indicators by Insurance Type

National Survey of Children's Health: 2011-12



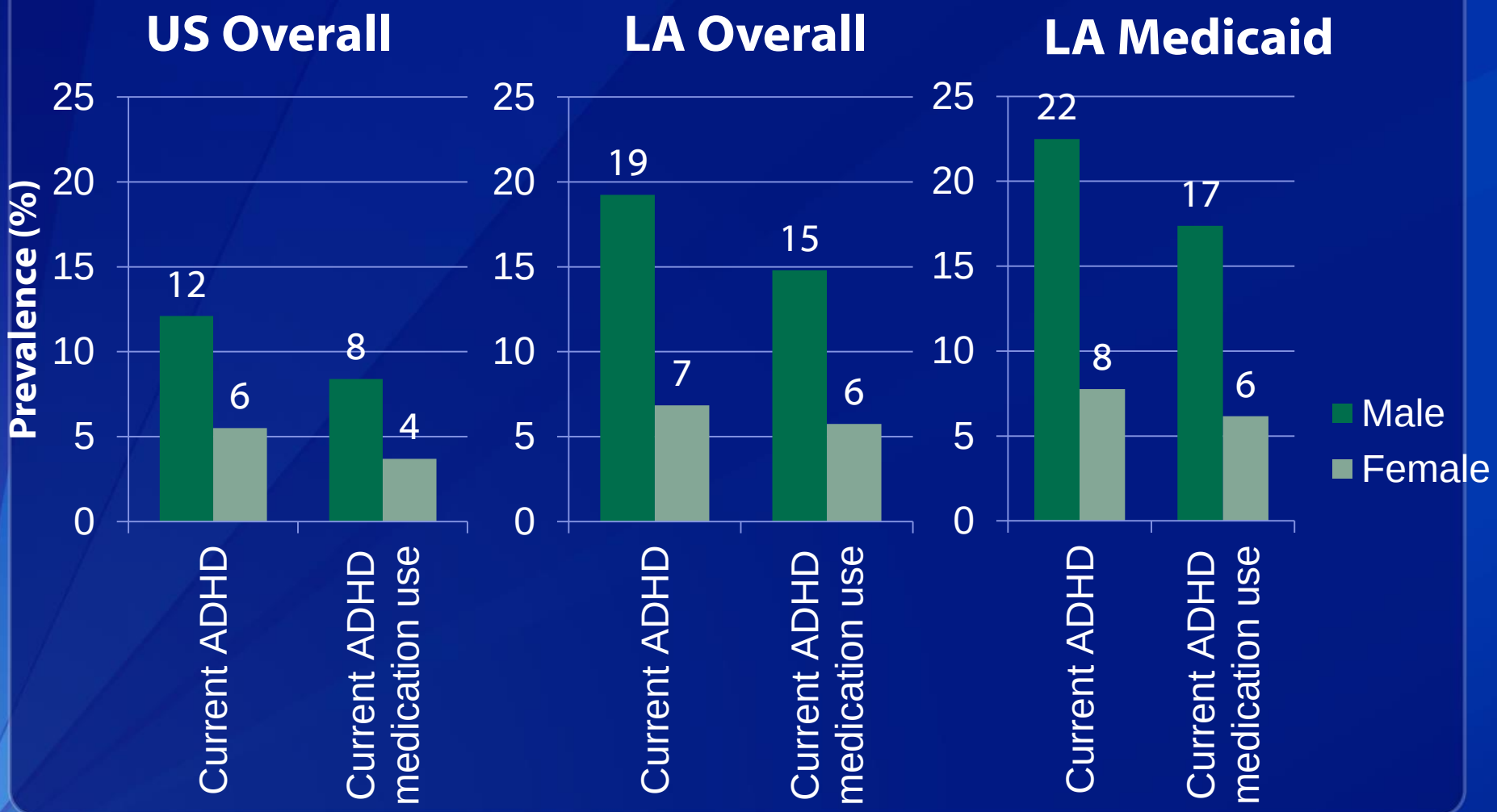
Louisiana: ADHD Indicators by Insurance Type

National Survey of Children's Health: 2011-12

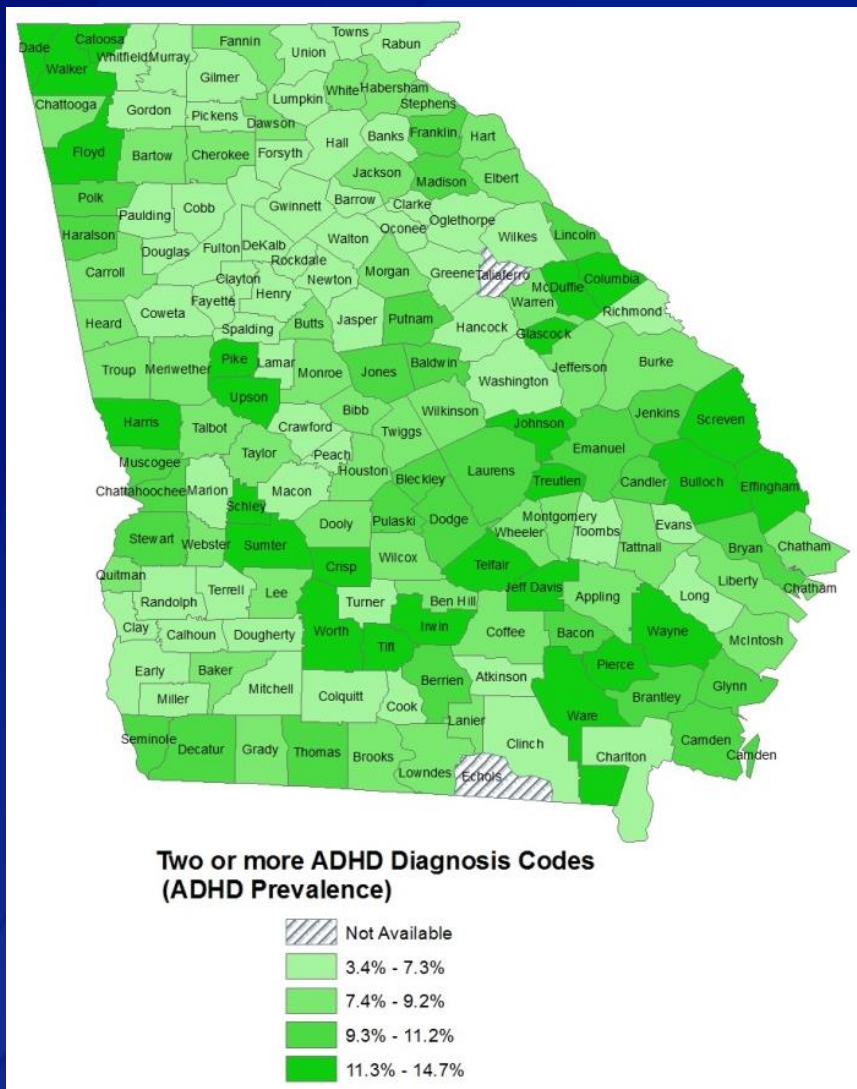


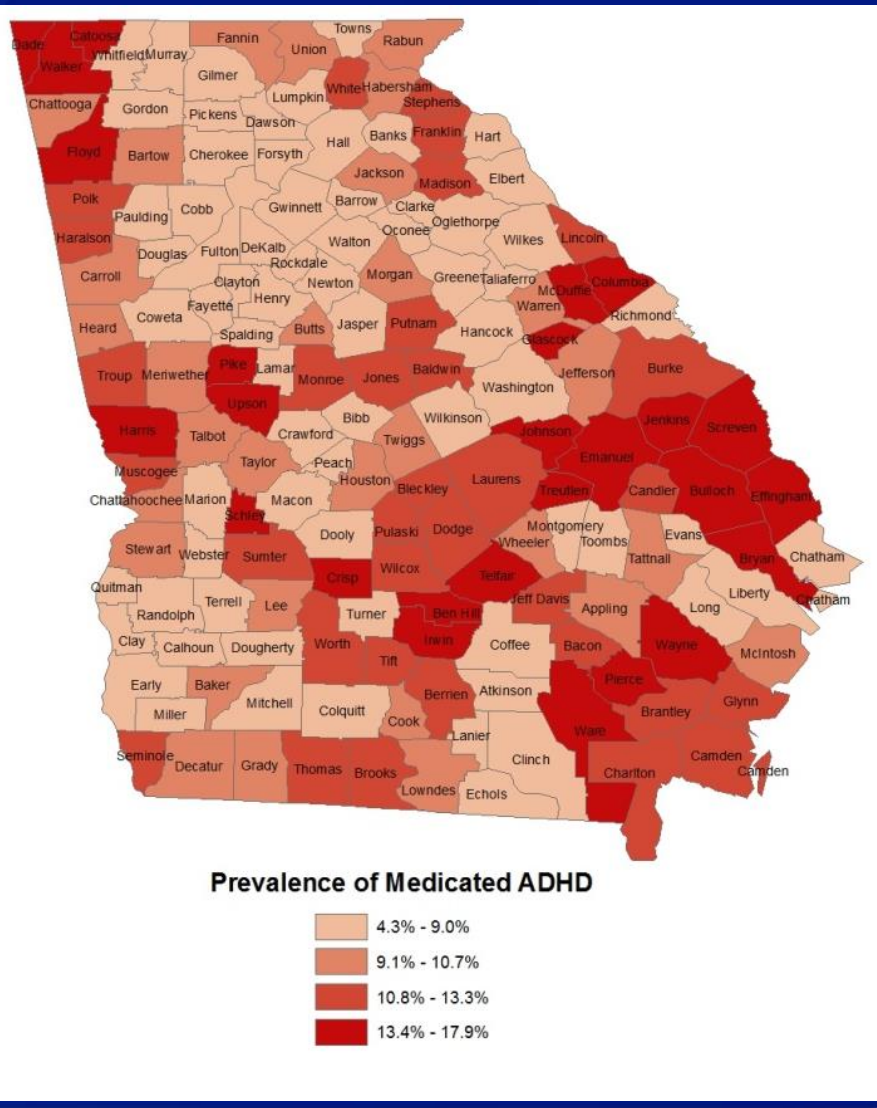
Louisiana: ADHD Indicators by Gender

National Survey of Children's Health: 2011-12



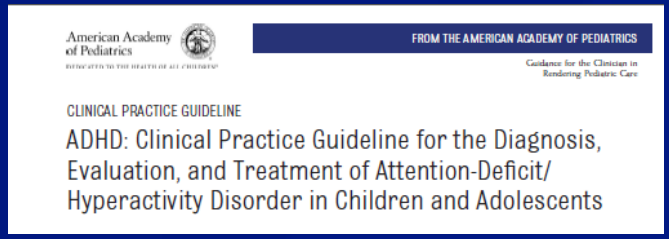
GA Medicaid Claims Data: Adolescents (11-17 years) Enrolled in Medicaid, 2011





Visser, SN., Kramer, D, Snyder, AB, Sebian, J, McGiboney, G. Handler, A. (Under review). "Student-Perceived School Climate is Associated with ADHD Medication Treatment among Adolescents in Medicaid."

Age-specific ADHD Treatment Recommendations from AAP

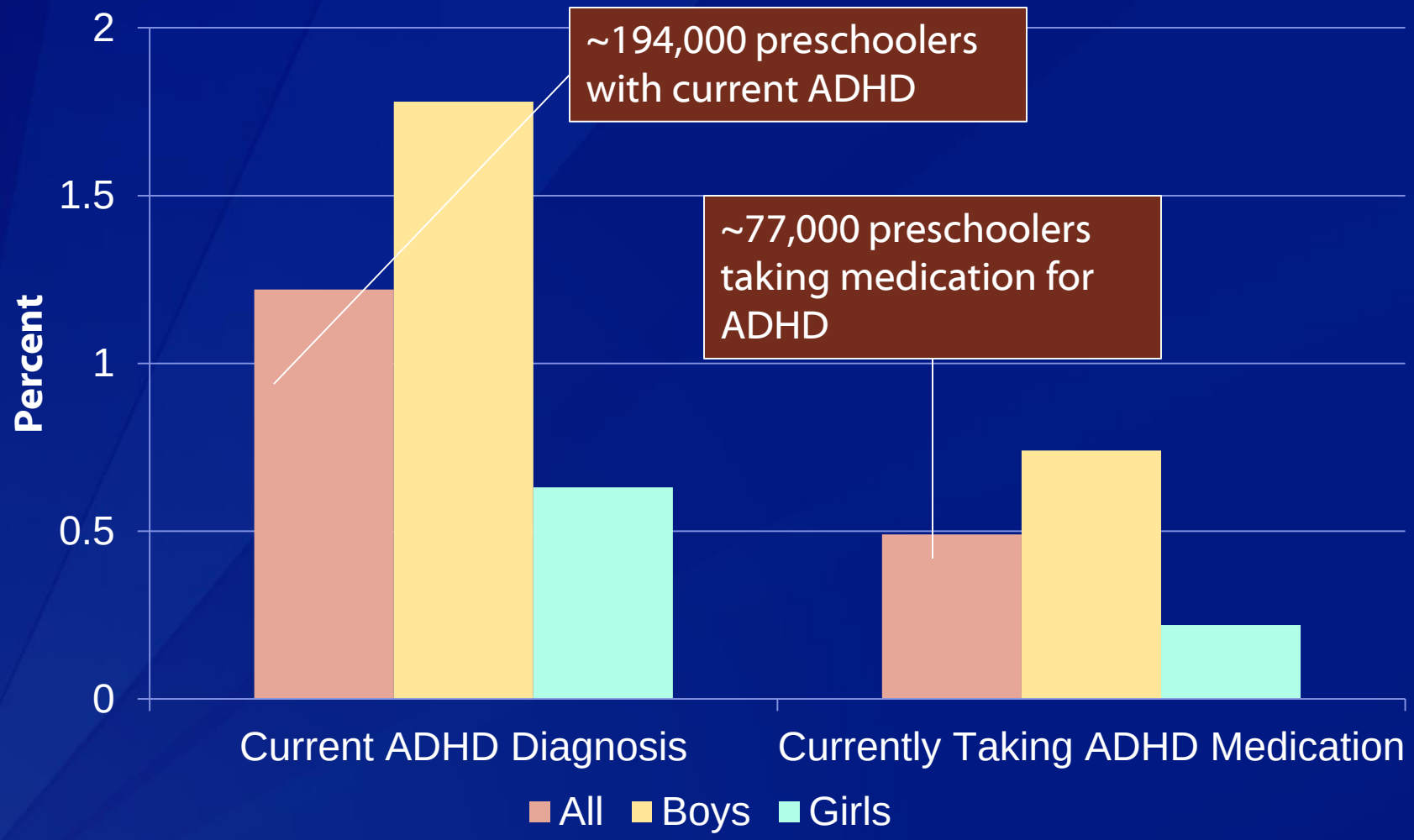


- For preschoolers (4–5 years), evidence-based parent and/or teacher administered behavior therapy as the *first line of treatment*
  - May prescribe methylphenidate if the behavior interventions do not provide significant improvement and there is moderate-to severe continuing disturbance in the child's function
  - If evidence-based behavioral treatments are not available, ***weigh the risks of starting medication at an early age against the harm of delaying diagnosis and treatment***
  - The primary care clinician should titrate doses of medication
- Children 6-12 should receive both ADHD medication and behavioral therapy
- Adolescents (13-18) should receive medication and behavioral therapy too, if possible

AAP's Subcommittee on Attention-Deficit/Hyperactivity Disorder Steering Committee on Quality Improvement and Management, Wolraich M, Brown L, et al. ADHD: Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. *Pediatrics*. November 1, 2011 2011;128(5):1007-1022.

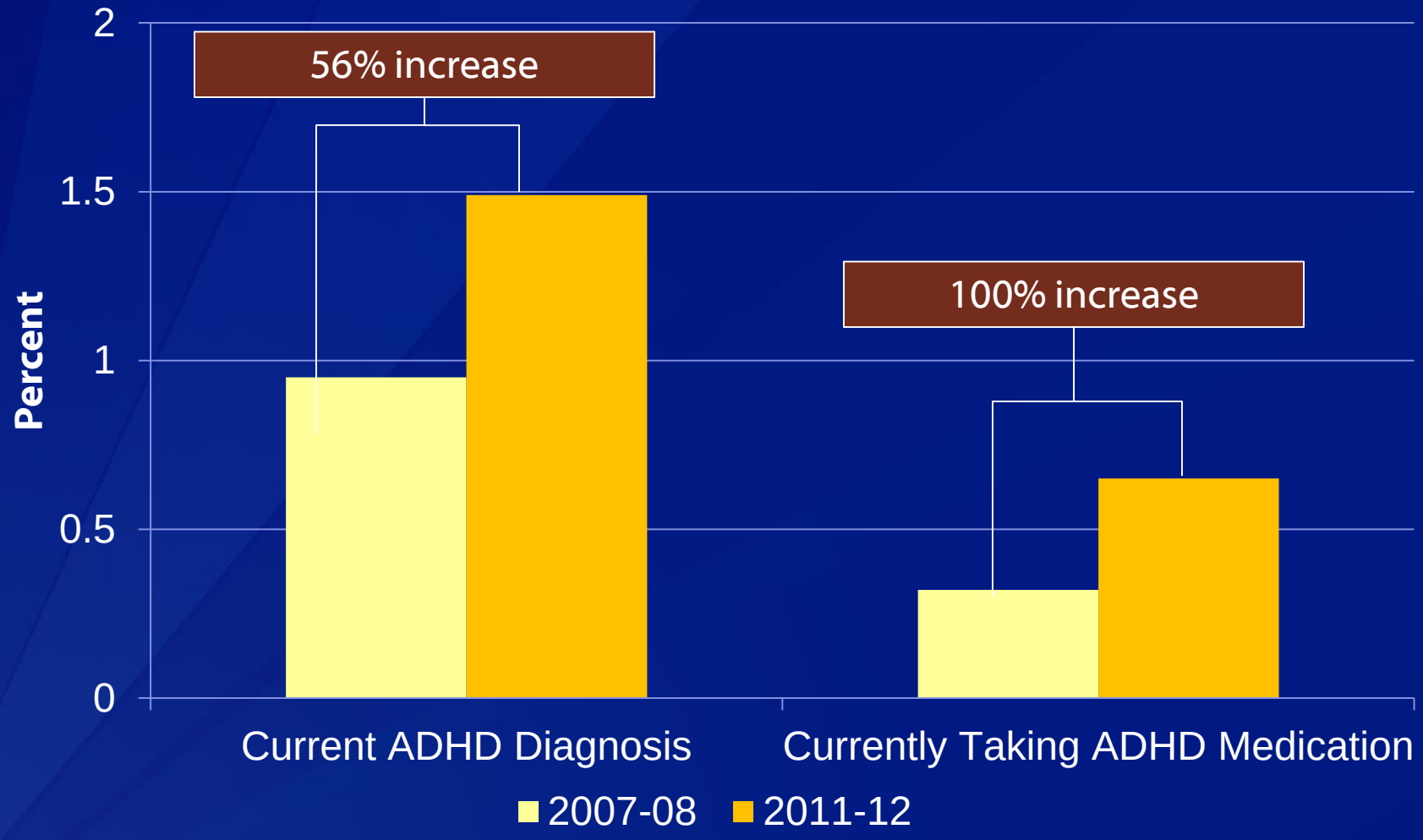
A CLOSER LOOK AT PRESCHOOLERS WITH ADHD

ADHD Diagnosis and Medication Treatment among Children Aged 2-5 Years



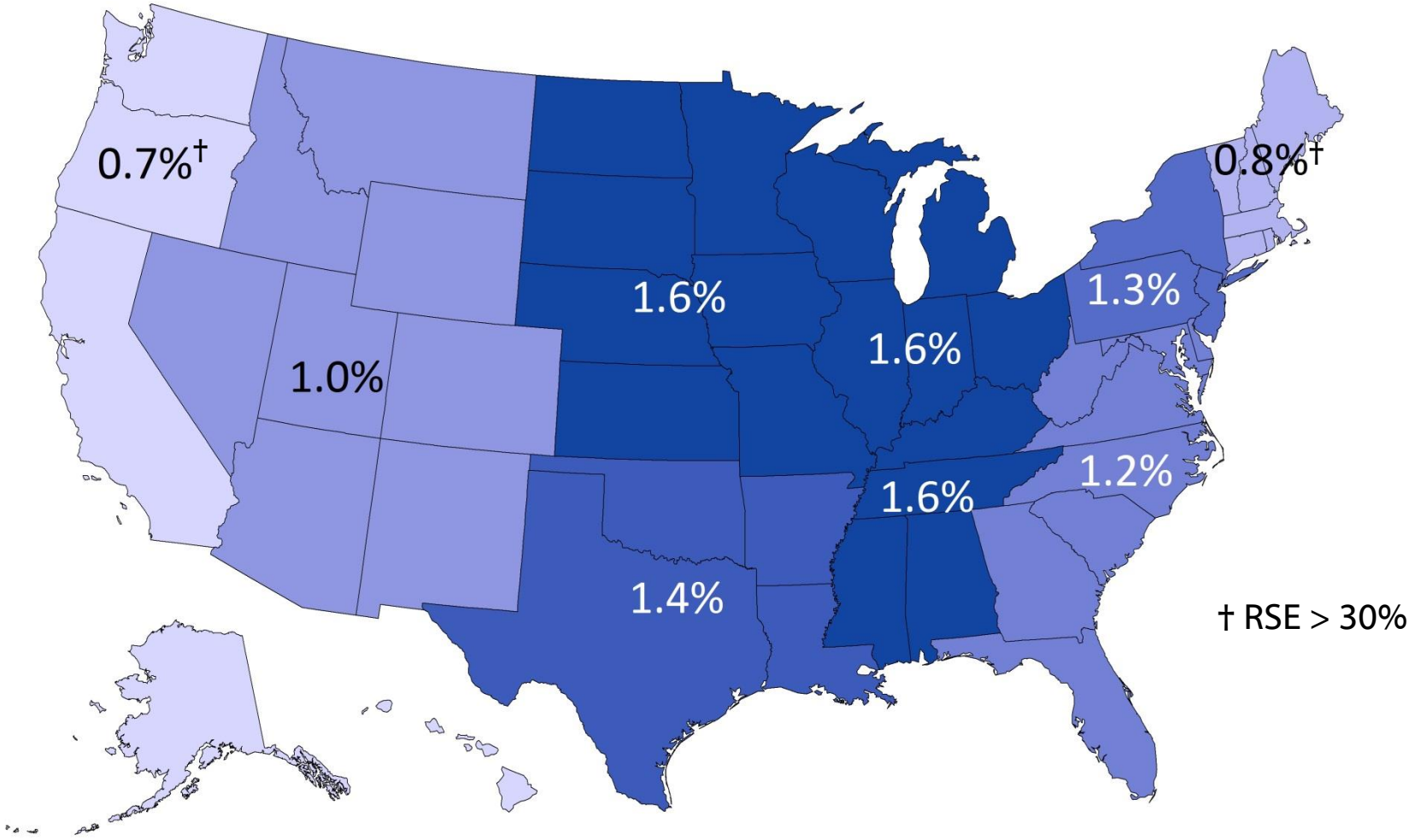
National Survey of Children's Health, 2007-08 and 2011-2012

Results – ADHD Diagnosis and Medication Treatment among Children Aged 2-5 Years



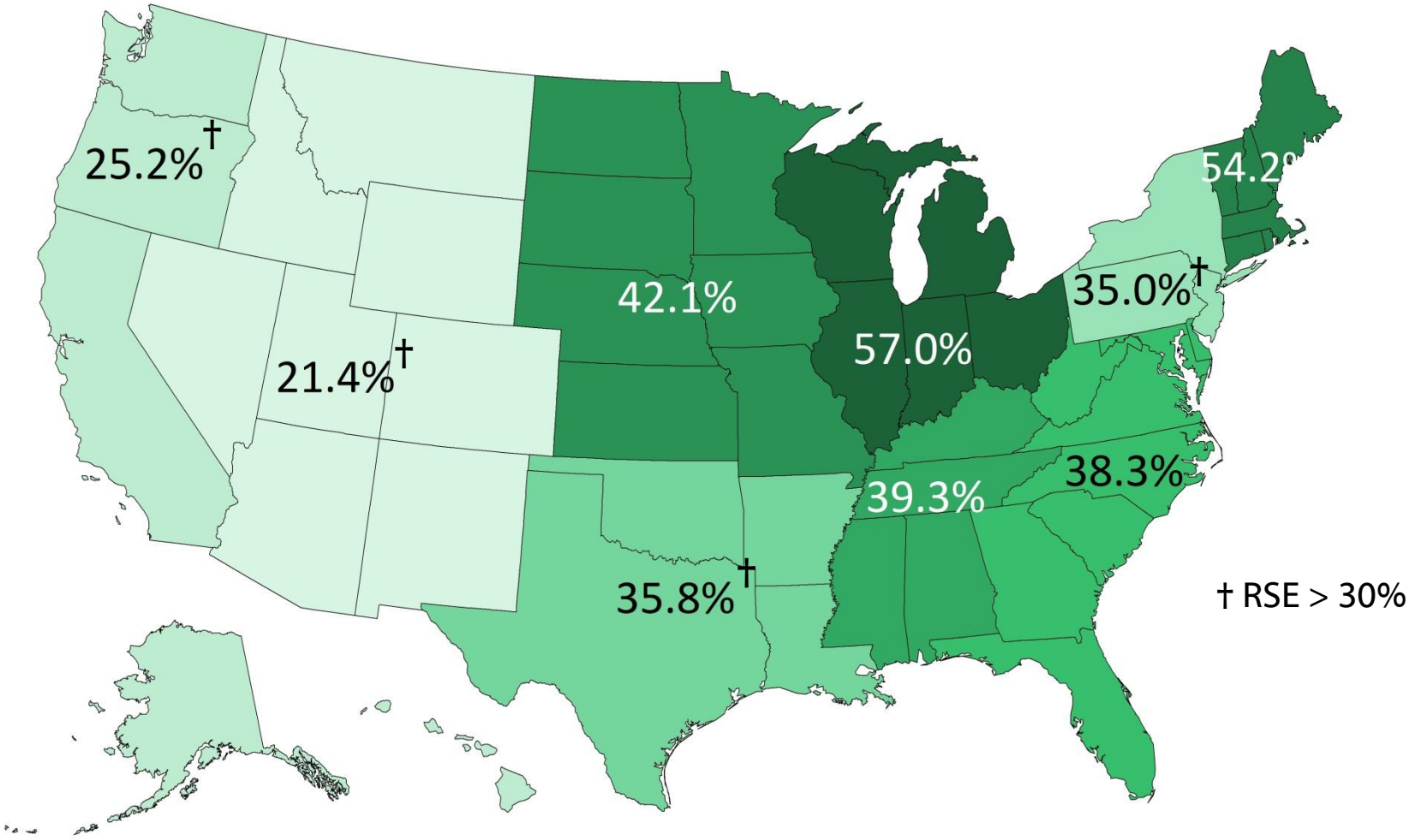
National Survey of Children's Health, 2007-08 and 2011-2012

Current ADHD Diagnosis among Children Aged 2-5 Years



National Survey of Children's Health, 2007-08 and 2011-2012

Percentage of Children Aged 2-5 Years with ADHD Who Currently Take ADHD Medication

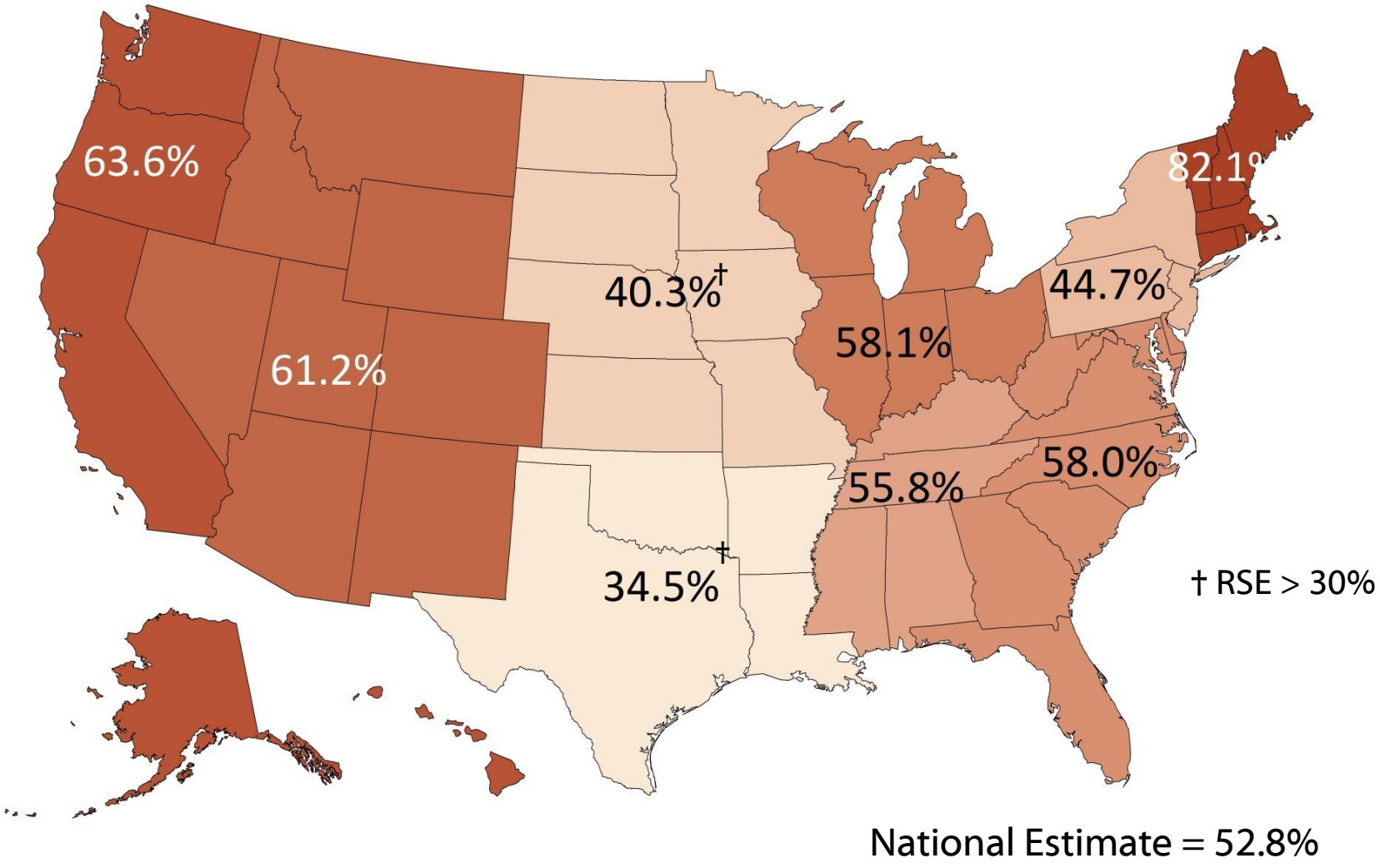


† RSE > 30%

National Estimate = 40.2%

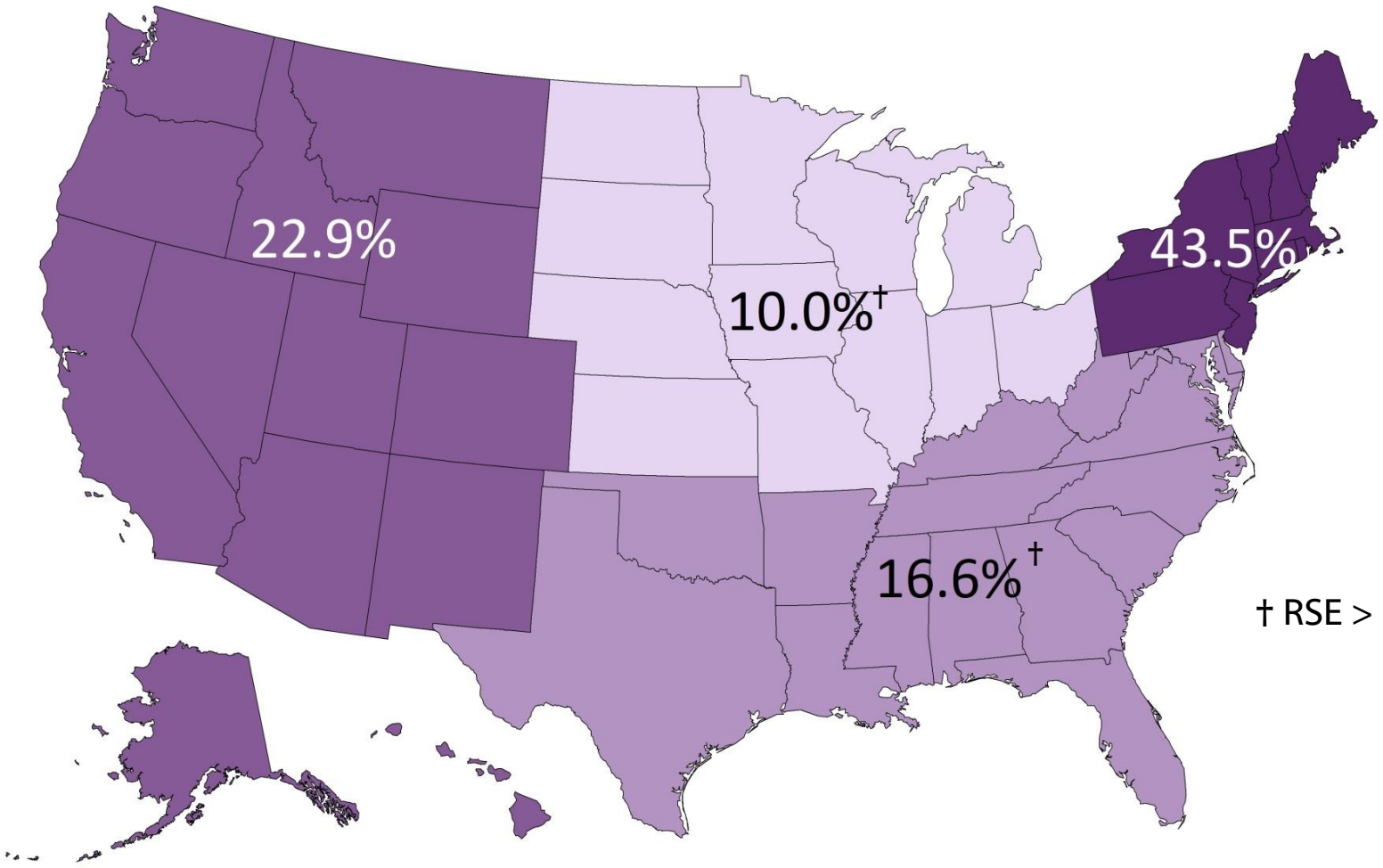
National Survey of Children's Health, 2007-08 and 2011-2012

Percentage of CSHCN aged 2-5 Years With ADHD Who Received Behavioral Therapy in Past 12 Months



National Survey of Children with Special Health Care Needs, 2009-10

Percentage of CSHCN aged 2-5 Years With ADHD Who Received Neither Medication Nor Behavioral Therapy



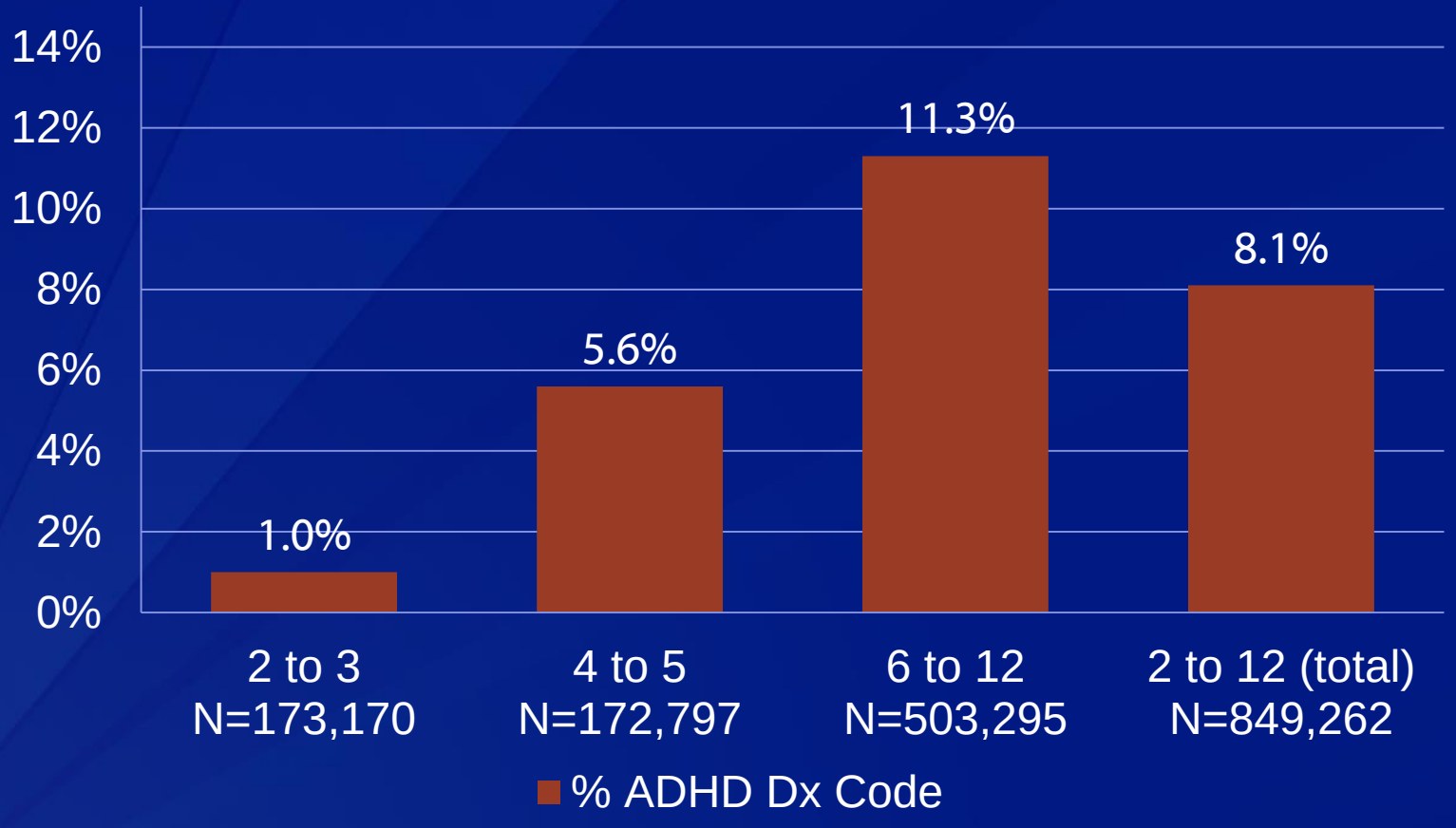
National Estimate = 22.1%

National Survey of Children with Special Health Care Needs, 2009-10

Digging Deeper with the GA Interagency Directors Team

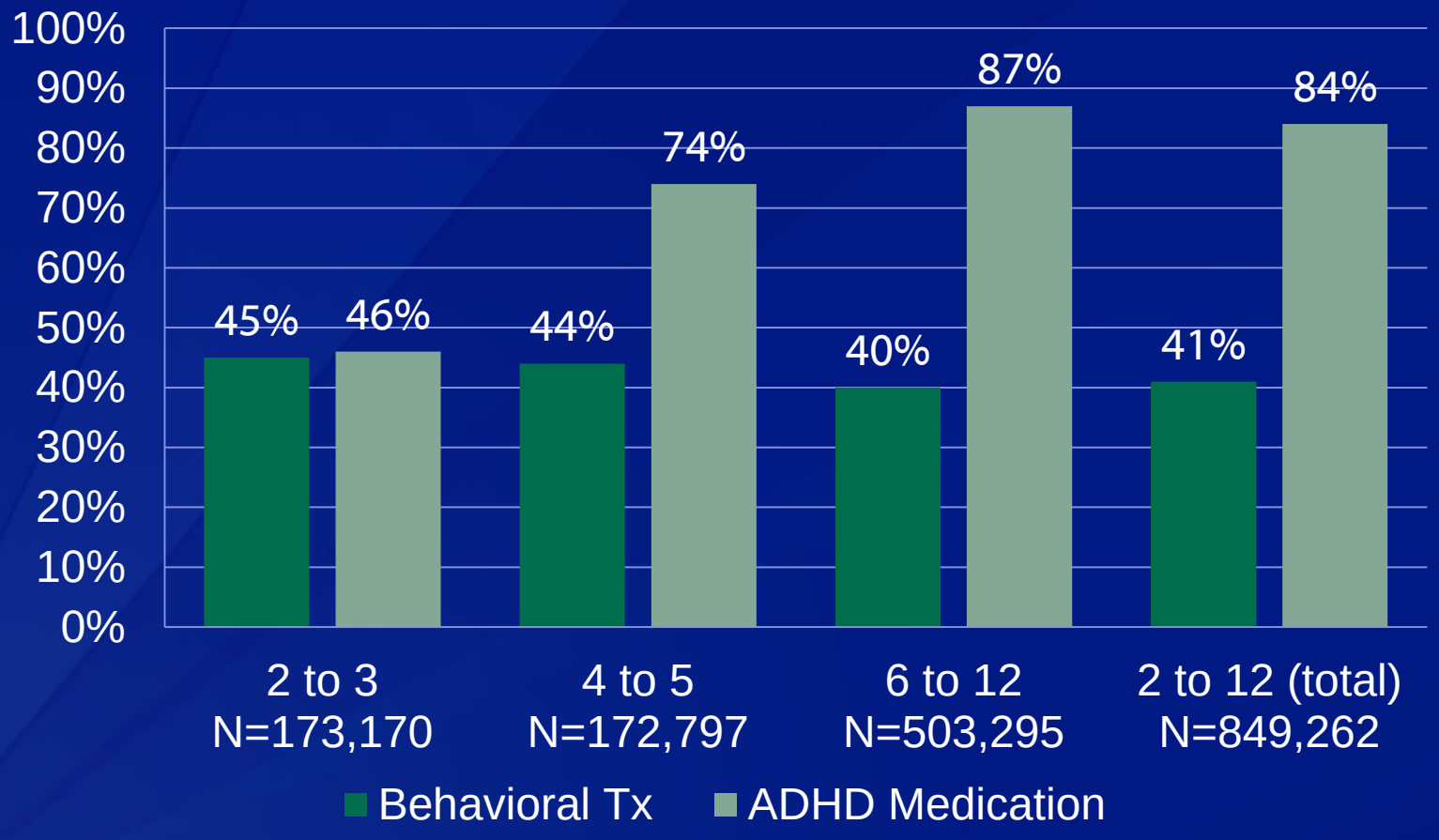
GA as a Proof of Concept State

Percentage of GA Children in Medicaid with 2+ ADHD Diagnosis Codes (2012)



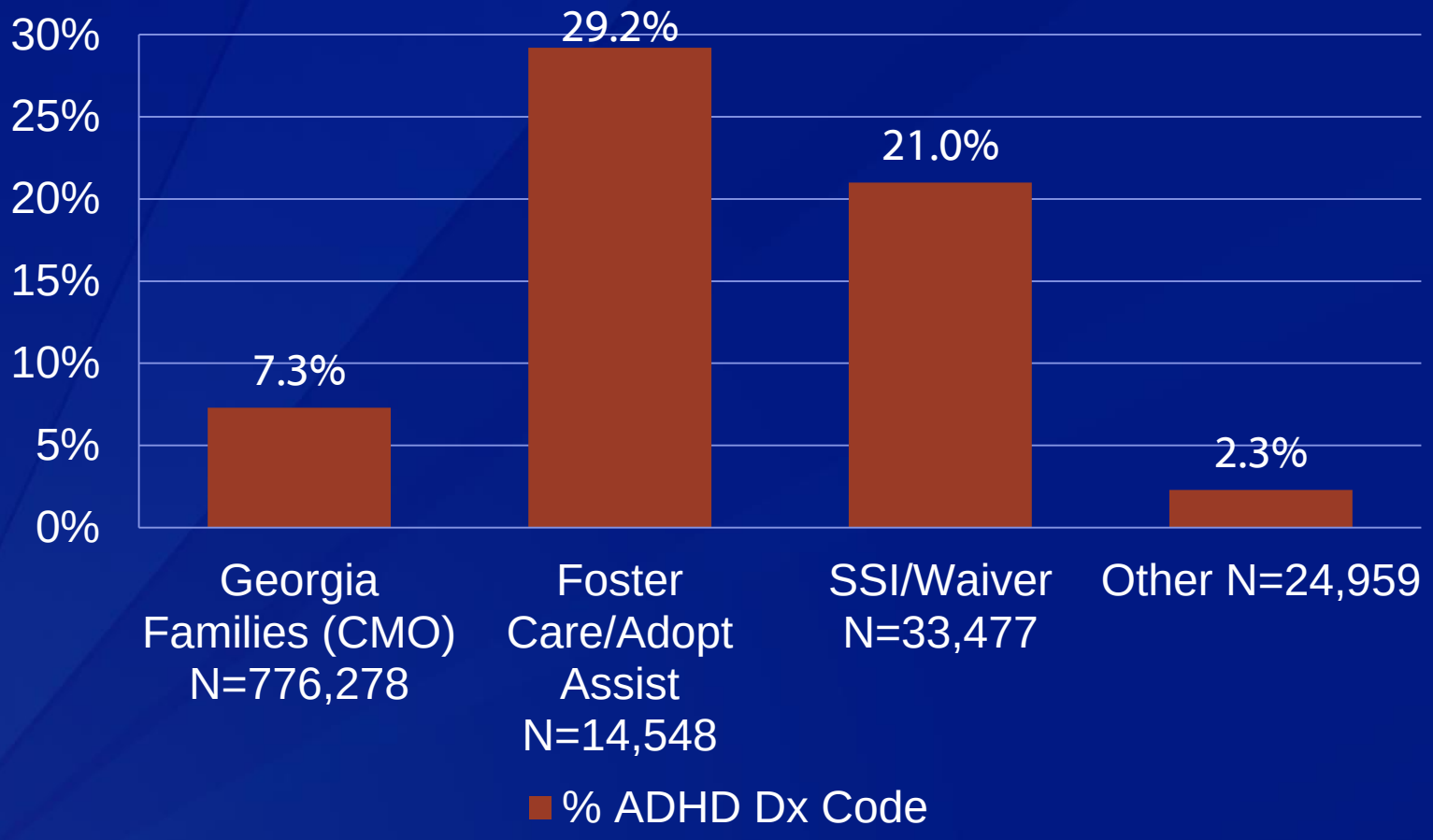
Unpublished data; released in collaboration with Georgia Inter-Agency Directors Team

Treatment of GA Children in Medicaid with 1+ ADHD Diagnosis Codes and 1+ treatment claim (2012)



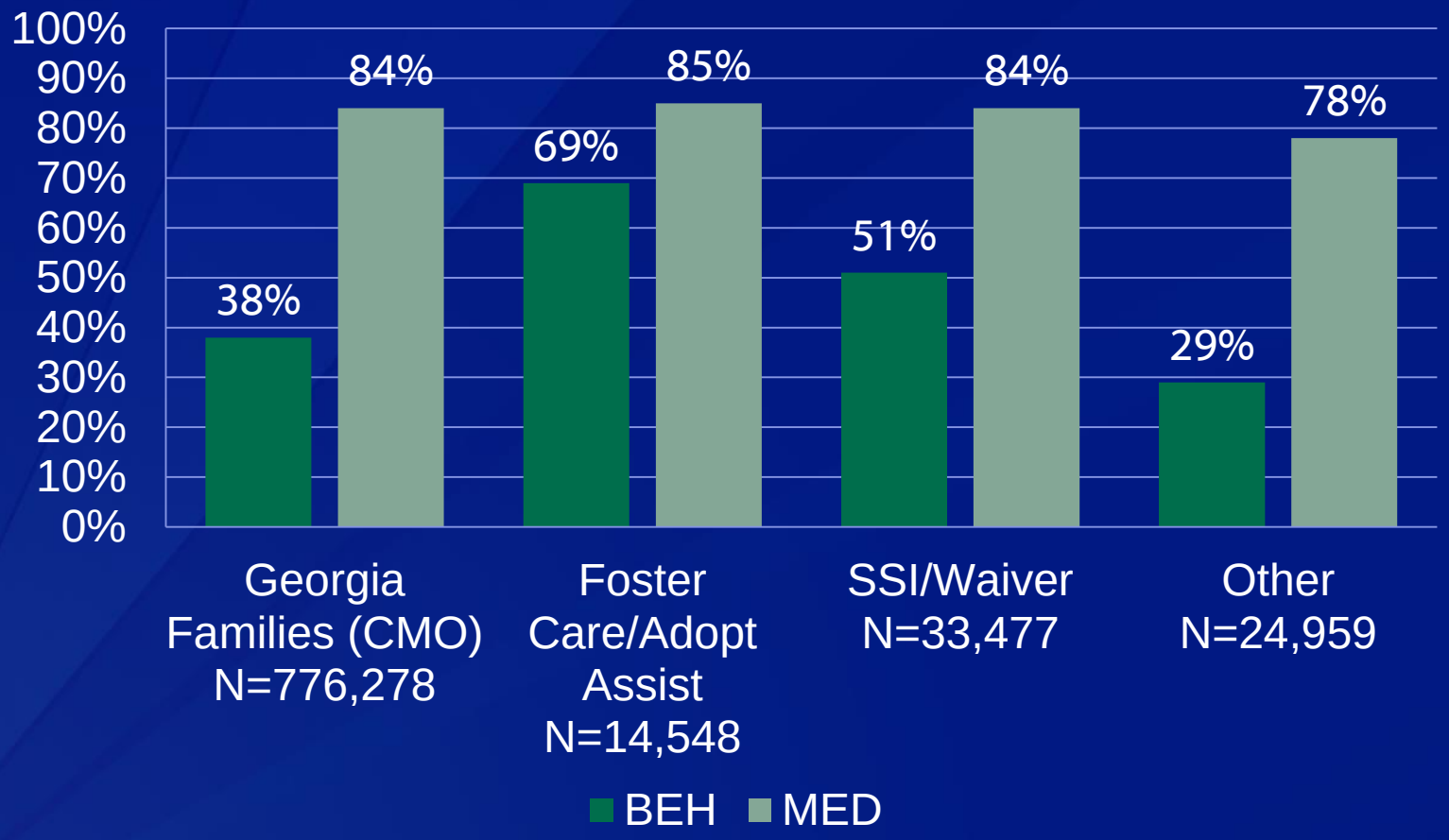
Unpublished data; released in collaboration with Georgia Inter-Agency Directors Team

Percentage of Children in Medicaid with 2+ ADHD Diagnosis Codes (2012), by Eligibility Categories



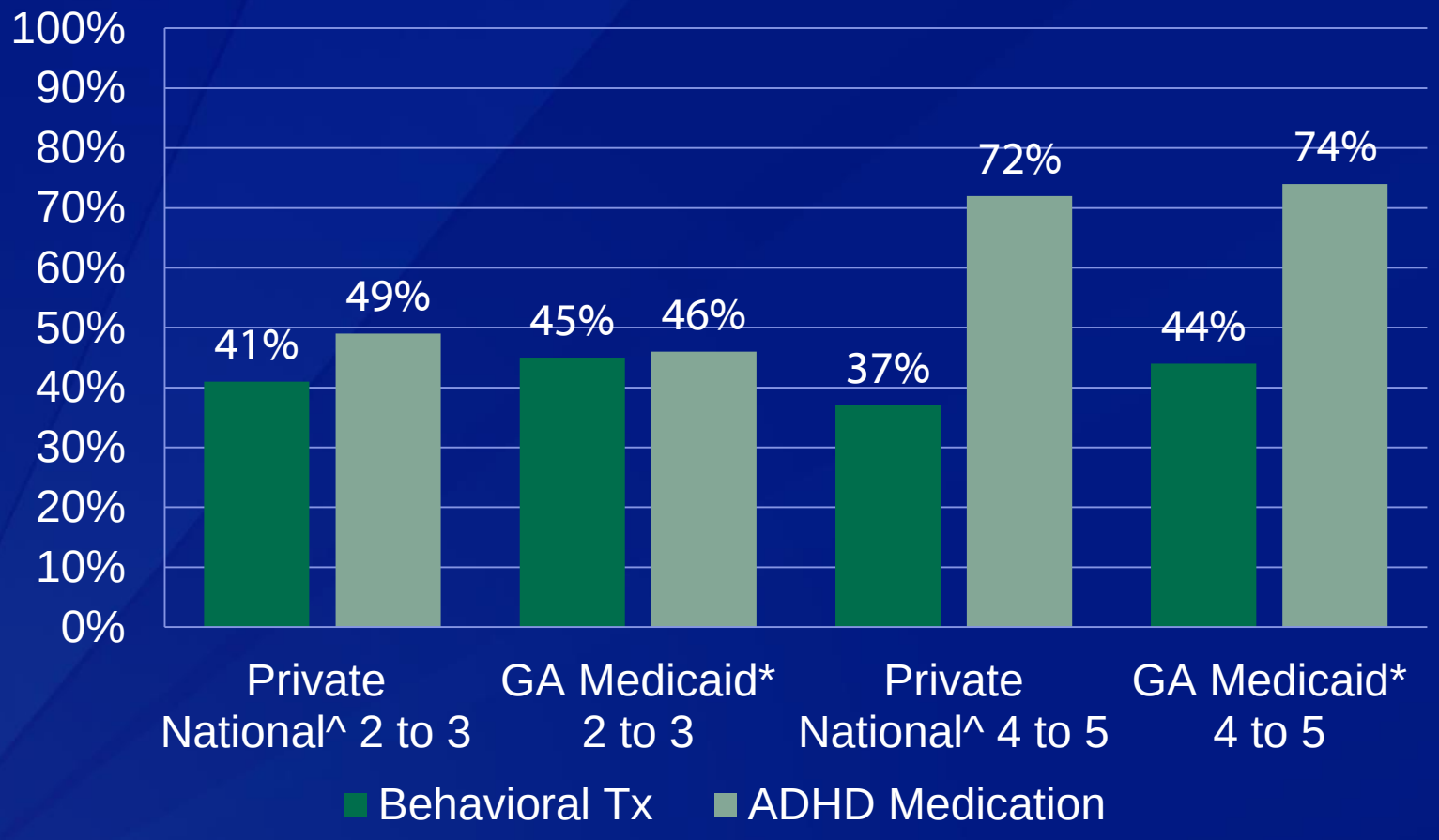
Unpublished data; released in collaboration with Georgia Inter-Agency Directors Team

Treatment of Children in Medicaid with 1+ ADHD Diagnosis Codes and 1+ Treatment Codes (2012), by Eligibility Categories



Unpublished data; released in collaboration with Georgia Inter-Agency Directors' Team

Treatment of Children with 2+ ADHD Diagnosis Codes, by Insurance Status and Geography

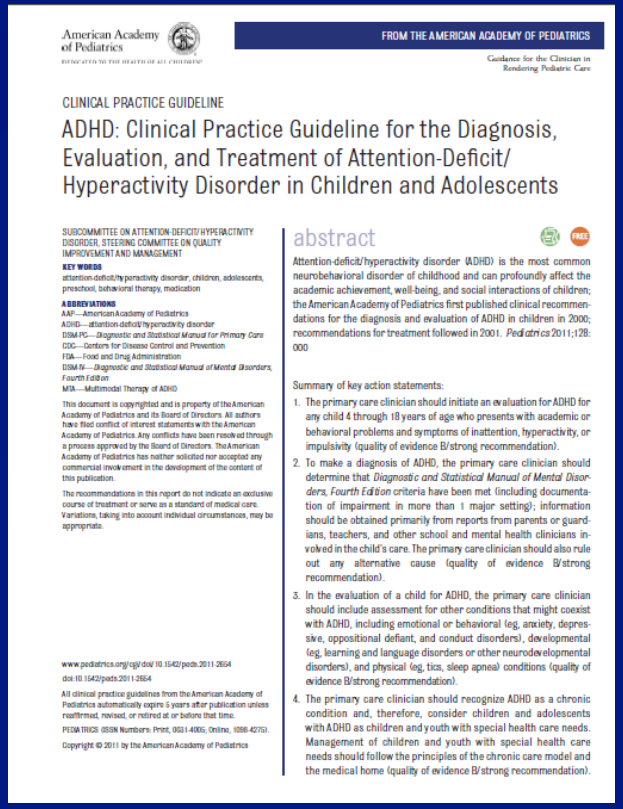


^ Among a MarketScan sample of 10,000,000 individuals; unpublished data

* Unpublished data; released in collaboration with Georgia Inter-Agency Directors' Team

Age-Specific ADHD Treatment Recommendations from AAP: Preschoolers

- Parent and/or teacher behavior therapy should be the *first line of treatment* for children aged 4-5 years
  - Methylphenidate can be prescribed if behavior interventions do not provide significant improvement
  - If evidence-based behavioral treatments are not available, the risks of starting medication at an early age must be weighed against the harm of delaying diagnosis and treatment



American Academy of Pediatrics

FROM THE AMERICAN ACADEMY OF PEDIATRICS

Guidance for the Clinician in Rendering Pediatric Care

CLINICAL PRACTICE GUIDELINE

ADHD: Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/ Hyperactivity Disorder in Children and Adolescents

SUBCOMMITTEE ON ATTENTION-DEFICIT/HYPERACTIVITY DISORDER, STEERING COMMITTEE ON QUALITY IMPROVEMENT AND MANAGEMENT

KEY WORDS

attention-deficit/hyperactivity disorder, children, adolescents, preschool, behavioral therapy, medication

ABBREVIATIONS

AAP—American Academy of Pediatrics
ADHD—attention-deficit/hyperactivity disorder
DSM-PC—*Diagnostic and Statistical Manual for Primary Care*
CDC—Centers for Disease Control and Prevention
FDA—Food and Drug Administration
DSM-IV—*Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*
MTA—Multimodal Therapy of ADHD

www.pediatrics.org/cgi/doi/10.1542/peds.2011-2654
doi:10.1542/peds.2011-2654

All clinical practice guidelines from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

abstract

Attention-deficit/hyperactivity disorder (ADHD) is the most common neurobehavioral disorder of childhood and can profoundly affect the academic achievement, well-being, and social interactions of children; the American Academy of Pediatrics first published clinical recommendations for the diagnosis and evaluation of ADHD in children in 2000; recommendations for treatment followed in 2001. *Pediatrics* 2011;128: 000

Summary of key action statements:

1. The primary care clinician should initiate an evaluation for ADHD for any child 4 through 18 years of age who presents with academic or behavioral problems and symptoms of inattention, hyperactivity, or impulsivity (quality of evidence B/strong recommendation).
2. To make a diagnosis of ADHD, the primary care clinician should determine that *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* criteria have been met (including documentation of impairment in more than 1 major setting); information should be obtained primarily from reports from parents or guardians, teachers, and other school and mental health clinicians involved in the child's care. The primary care clinician should also rule out any alternative cause (quality of evidence B/strong recommendation).
3. In the evaluation of a child for ADHD, the primary care clinician should include assessment for other conditions that might coexist with ADHD, including emotional or behavioral (eg, anxiety, depressive, oppositional defiant, and conduct disorders), developmental (eg, learning and language disorders or other neurodevelopmental disorders), and physical (eg, tics, sleep apnea) conditions (quality of evidence B/strong recommendation).
4. The primary care clinician should recognize ADHD as a chronic condition and, therefore, consider children and adolescents with ADHD as children and youth with special health care needs. Management of children and youth with special health care needs should follow the principles of the chronic care model and the medical home (quality of evidence B/strong recommendation).

American Academy of Pediatrics' Subcommittee on Attention-Deficit/Hyperactivity Disorder Steering Committee on Quality Improvement and Management, Wolraich M, Brown L, et al. ADHD: Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. *Pediatrics.* November 1, 2011 2011;128(5):1007-1022.

Comparative Effectiveness of ADHD and DBD Interventions in Young Children (< 6 years)

Table A. KQ1: Effectiveness of interventions for ADHD and DBD in children younger than 6 years of age

Intervention	Level of Evidence	Conclusion
Parent Behavior Training	SOE: High SMD: -0.68 (95% CI, -0.88 to -0.47)	Parent behavioral interventions are an efficacious treatment option for preschoolers with DBD and show benefit for ADHD symptoms. These studies support the long-term effectiveness of parent interventions for preschoolers with DBD, including ADHD symptoms, with evidence that benefits are maintained for up to 2 years. There also appears to be a dose-response effect.
Medication (MPH Only)	SOE: Low SMD: -0.83 (95% CI, -1.21 to -0.44)	With evidence drawn primarily from the PATS study, MPH (e.g., short-acting, immediate-release MPH) is both efficacious and generally safe for treatment of ADHD symptoms, but there has been no long-term followup in preschoolers.

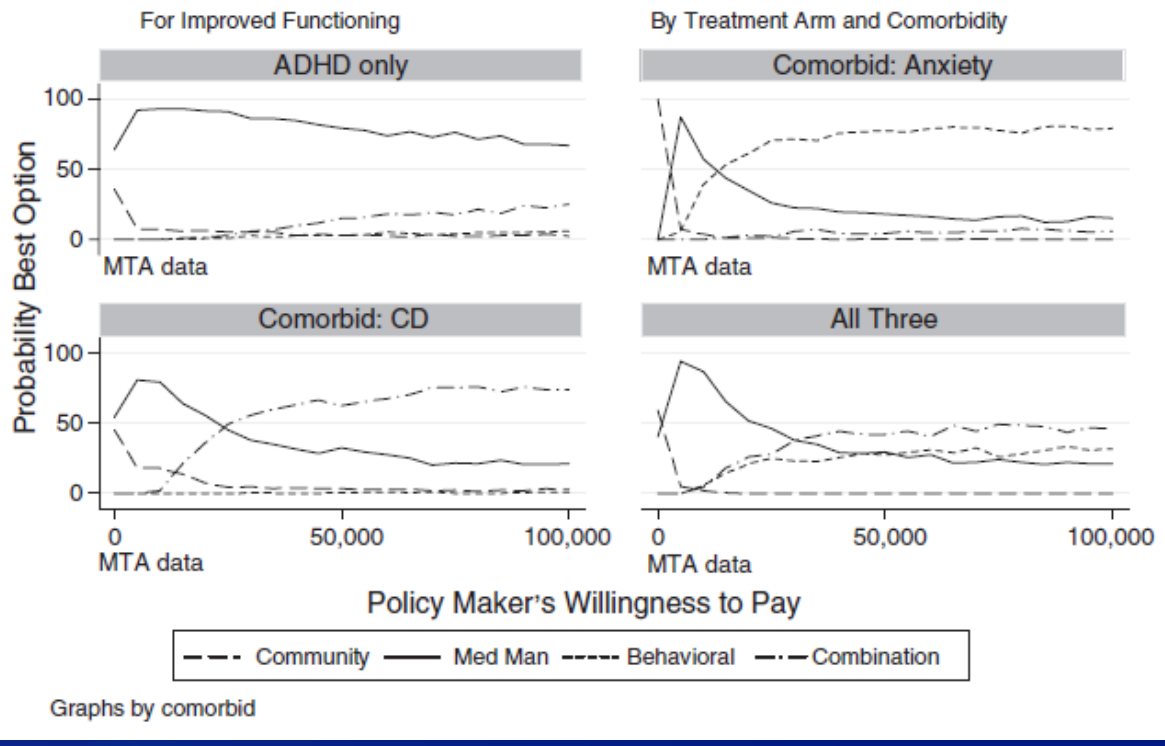
Note: ADHD = attention deficit hyperactivity disorder; CI = confidence interval; DBD = disruptive behavior disorder; KQ = Key Question; MPH = methylphenidate; PATS = Preschool ADHD Treatment Study; PBT = parent behavior training; SMD = standardized mean difference; SOE = strength of evidence.

Available at: http://effectivehealthcare.ahrq.gov/ehc/products/191/814/CER44_ADHD_ExecSumm_20111021.pdf

•*Charach A, Carson P, Fox S, Ali MU, Beckett J, Lim CG. Interventions for Preschool Children at High Risk for ADHD: A Comparative Effectiveness Review. *Pediatrics*. 2013;131(5):e1584-e1604.

Behavioral Therapy is an Important and Cost-Effective ADHD Treatment

Figure 2: Likelihood of Cost-Effectiveness for Improved Functioning by Treatment Arm



Foster, E. M., Jensen, P. S., Schlander, M., Pelham, W. E., Jr., Hechtman, L., Arnold, L. E., . . . Wigal, T. (2007). Treatment for ADHD: is more complex treatment cost-effective for more complex cases? *Health Serv Res, 42*(1 Pt 1), 165-182. doi: 10.1111/j.1475-6773.2006.00599.x

Evidence-Based Therapies for Preschoolers with ADHD

- **The Agency for Health Care Research and Quality (AHRQ) reviewed treatments for preschoolers with behavioral problems**
- **Recommended *parent behavioral interventions* as a good treatment option for preschoolers with ADHD, ADHD symptoms, and disruptive behavior in general**
- **4 programs for parents of preschoolers**
  - Triple P (Positive Parenting of Preschoolers program)
  - Incredible Years Parenting Program
  - Parent-Child Interaction Therapy (PCIT)
  - New Forest Parenting Programme
- **Key components of effective programs**
  - Help parents develop a positive relationship with their child
  - Teach them about how children develop
  - Help them manage negative behavior with positive discipline

Gaynes B, Christian R, Saavedra L, Wines R, Jonas D, Viswanathan M, Ellis A, Woodell C, Carey T. Treatment in At-Risk Preschoolers; Long-Term Effectiveness in All Ages; and Variability in Prevalence, Diagnosis, and Treatment. Rockville (MD), 2012.

Components of Effective Parenting Programs

- Proliferation of parent training programs as prevention/intervention
- New uses of parent training programs
- Research Questions
  - How effective is parent training?
  - Is all "parent training" the same?
- Meta-analysis of components of effective parenting programs (0-7 years of age) with outcomes on:
  - Parent behavior & skill acquisition
  - Child externalizing behaviors
- 77 published studies

J Abnorm Child Psychol (2008) 36:567–589
DOI 10.1007/s10802-007-9201-9

A Meta-analytic Review of Components Associated with Parent Training Program Effectiveness

Jennifer Wyatt Kaminski · Linda Anne Valle · Jill H. Filene · Cynthia L. Boyle

Published online: 19 January 2008

Abstract This component analysis used meta-analytic techniques to synthesize the results of 77 published evaluations of parent training programs (i.e., programs that included the active acquisition of parenting skills) to enhance behavior and adjustment in children aged 0–7. Characteristics of program content and delivery method were used to predict effect sizes on measures of parenting behaviors and children's externalizing behavior. After controlling for differences attributable to research design, program components consistently associated with larger effects included increasing positive parent-child interactions and emotional communication skills, teaching parents to use time out and the importance of parenting consistency, and requiring parents to practice new skills with their children during parent training sessions. Program components consistently associated with smaller effects included teaching parents problem solving; teaching parents to promote children's cognitive, academic, or social skills; and providing other, additional services. The results have implications for selection and strengthening of existing parent training programs.

Keywords Parent training · Meta-analysis · Child behavior problems · Component analysis

Early childhood behavior problems are generally characterized by oppositional, aggressive, impulsive, and inattentive behaviors. Although discrete instances of such behaviors are typical in very young children, pervasive and unremitting aggression and conduct problems in childhood reliably predict delinquent, aggressive, and risky behaviors in adolescence (e.g., Brody et al. 2003; Fergusson et al. 1994; Tolan and Gorman-Smith 1998). As well, adolescents whose problem behaviors began in childhood commit more serious and violent acts and account for a disproportionate number of all youth offenses than adolescents without an early history of conduct problems (Farrington et al. 2003; Loeber et al. 1998; Tolan and Gorman-Smith 1998; Thornberry et al. 2003). Although most adolescent deviance discontinues at the end of the teenage years, individuals who exhibited conduct problems in childhood are more likely to engage in "life-course-persistent" antisocial behavior that continues through adolescence into adulthood (Moffitt and Caspi 2001; Moffitt et al. 2002). The life-course persistent pathway from childhood conduct problems to adult criminality and violent behaviors may best be interrupted early in life, when behavioral patterns are more easily modified (Tremblay 2006).

The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

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Springer

Kaminski, J.W., Valle, L. A., Filene, J. H., & Boyle, C. L. (2008). A meta-analytic review of components associated with parent training program effectiveness. [Meta-Analysis]. *J Abnorm Child Psychol, 36*(4), 567-589. doi: 10.1007/s10802-007-9201-9

Program Components that Predicted Parent and Child Outcomes

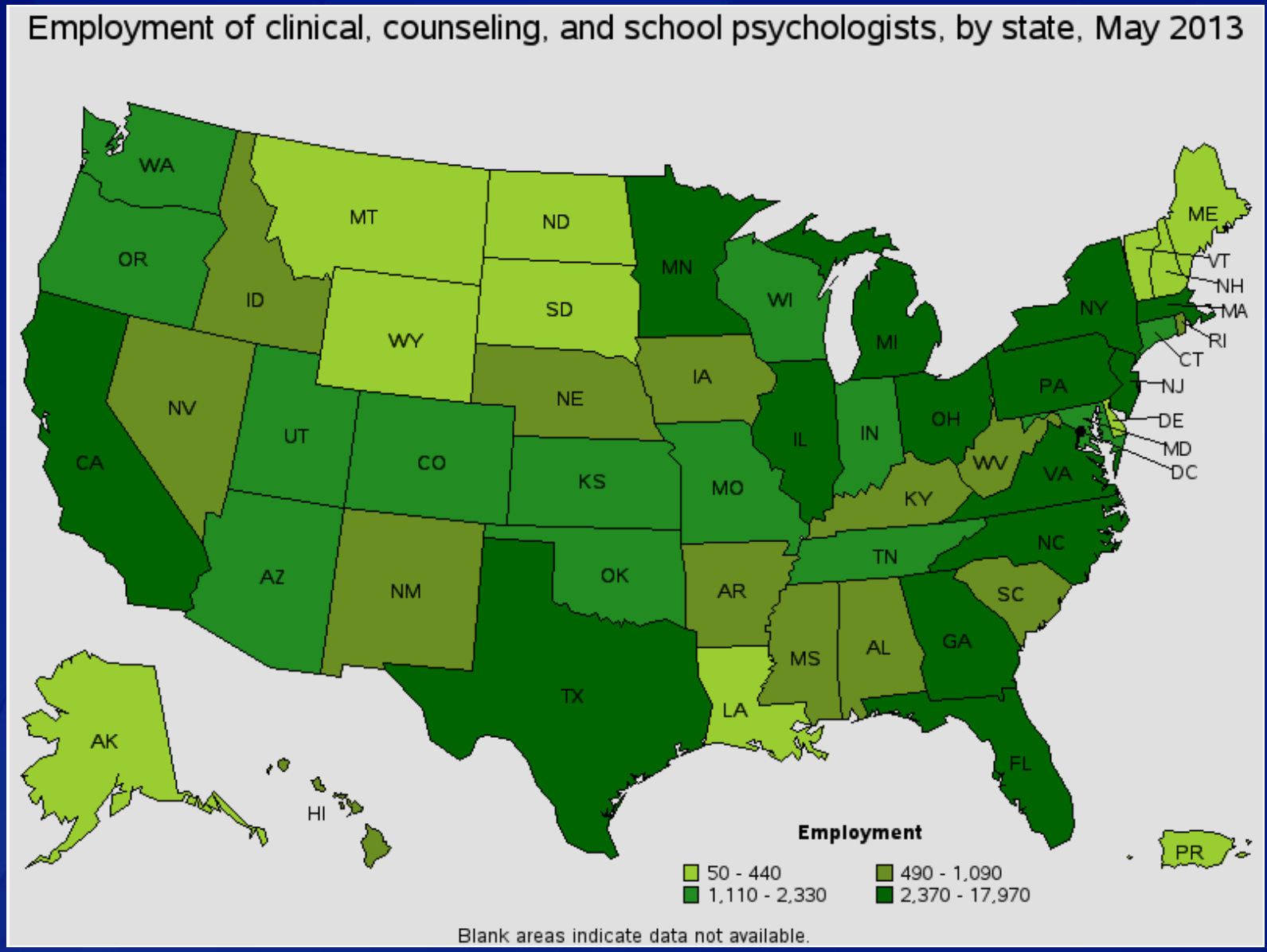
- Most robust predictors of parent skill acquisition
  - Teaching parents relationship-building communication skills
  - Having parents practice with their own child during the sessions

- Most robust predictors of child externalizing behaviors
  - Teaching parents to interact positively with their children and provide positive attention
  - Teaching parents consistent disciplinary responding

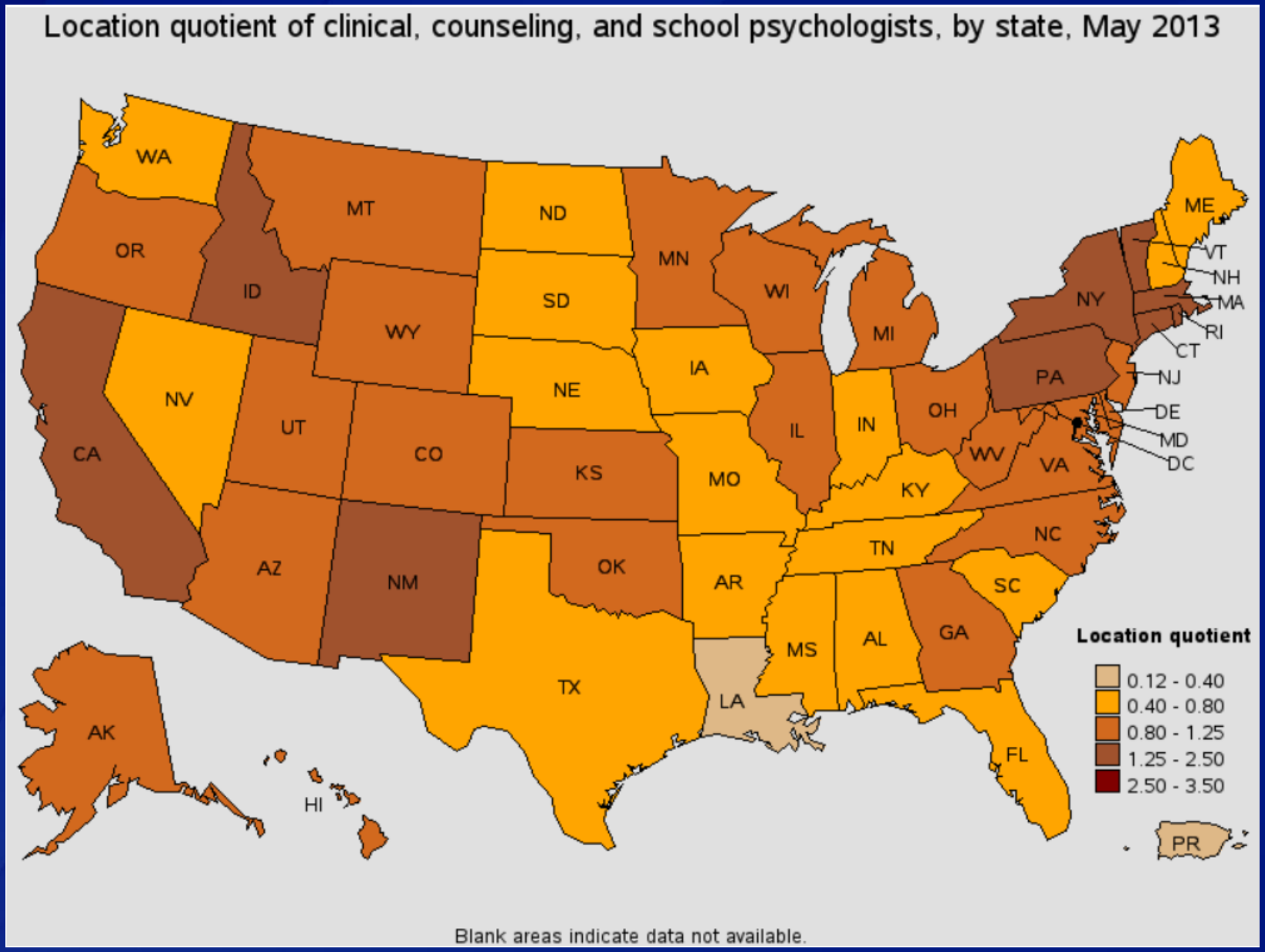
Kaminski, J. W., Valle, L. A., Filene, J. H., & Boyle, C. L. (2008). A meta-analytic review of components associated with parent training program effectiveness. [Meta-Analysis]. *J Abnorm Child Psychol, 36*(4), 567-589. doi: 10.1007/s10802-007-9201-9

Behavioral Therapy for Preschoolers with ADHD: Sources of Behavioral Services

•*Charach A, Carson P, Fox S, Ali MU, Beckett J, Lim CG. Interventions for Preschool Children at High Risk for ADHD: A Comparative Effectiveness Review. *Pediatrics*. 2013;131(5):e1584-e1604.



http://www.bls.gov/oes/current/oes193031.htm



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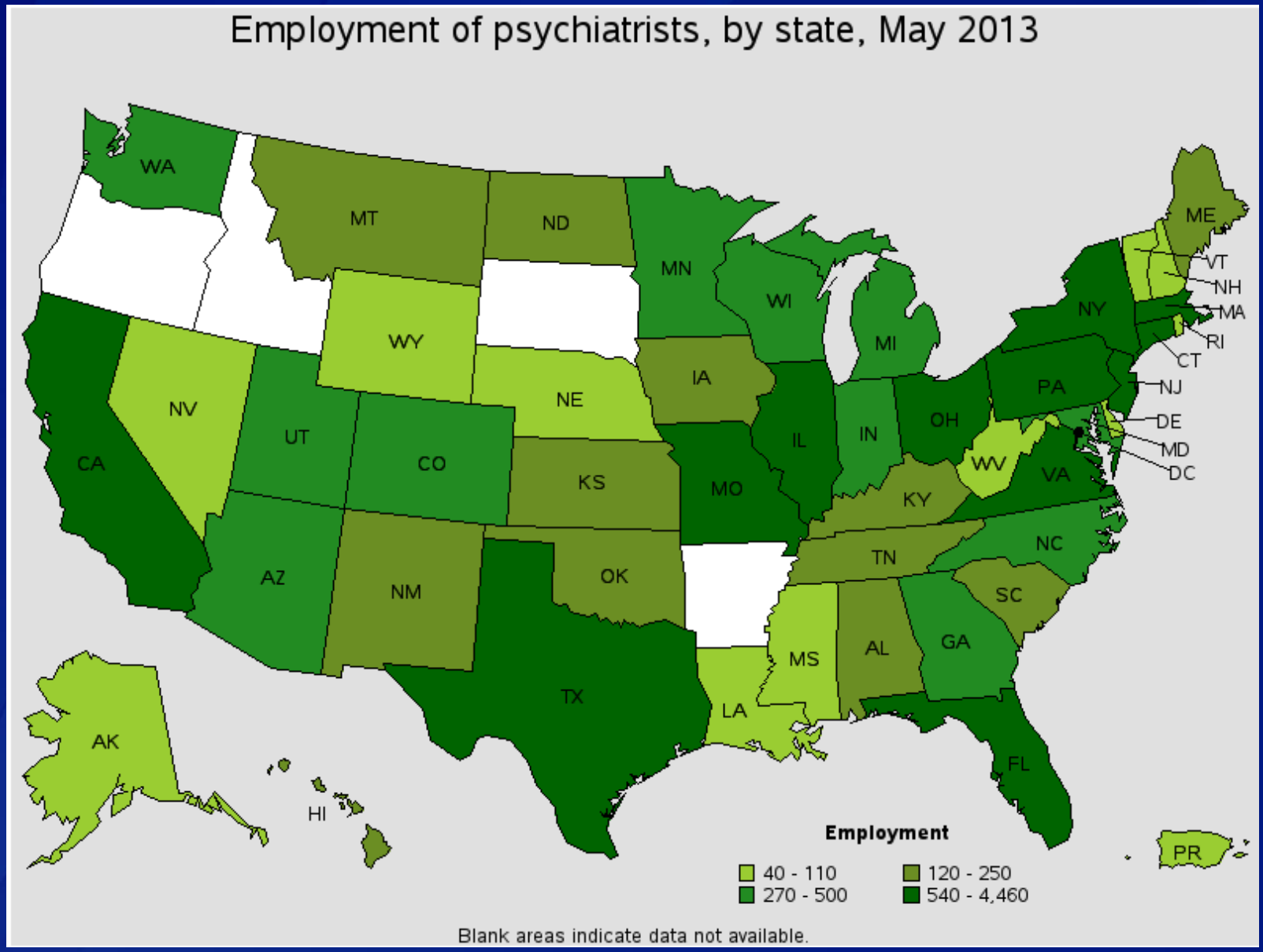
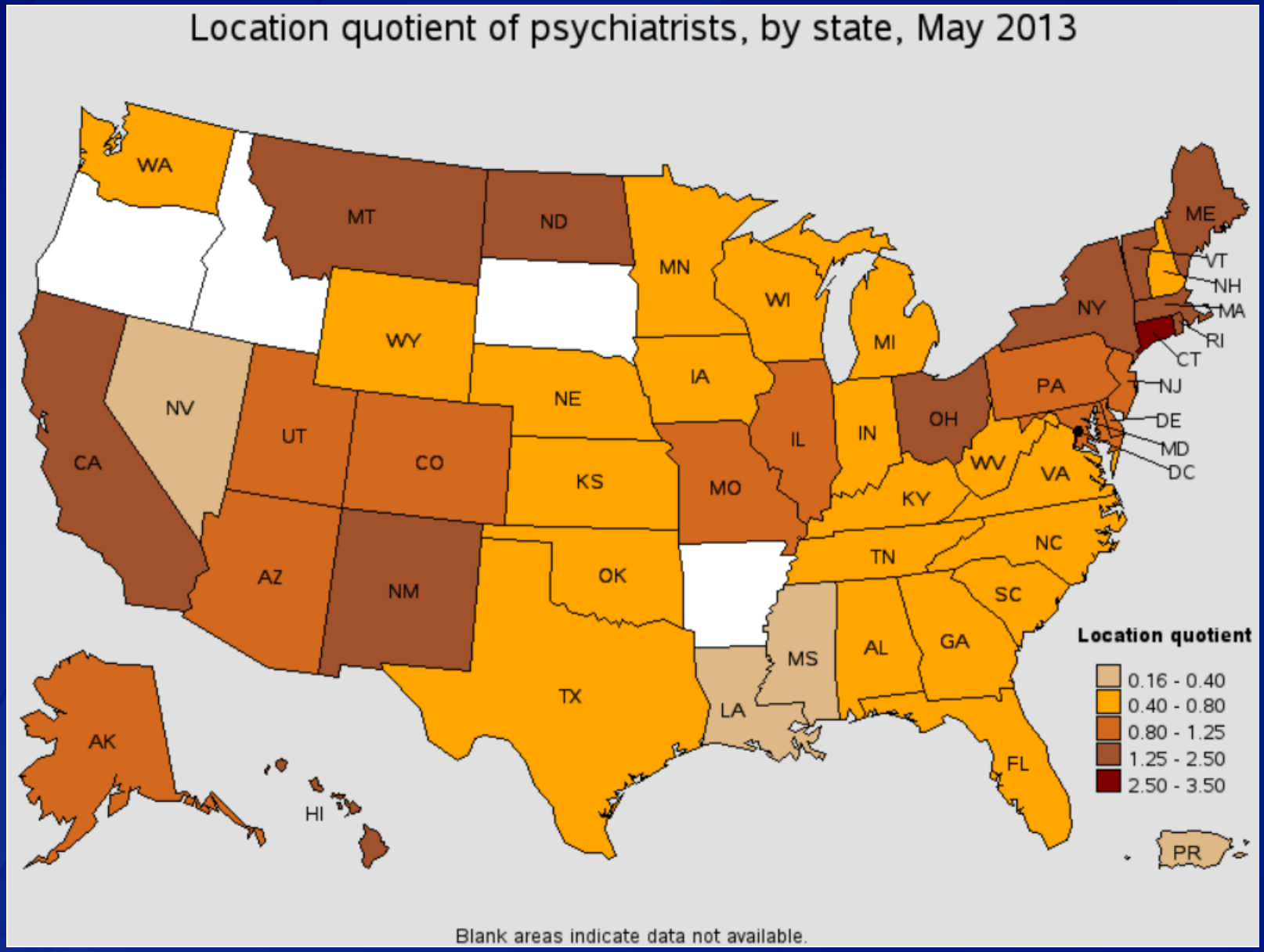
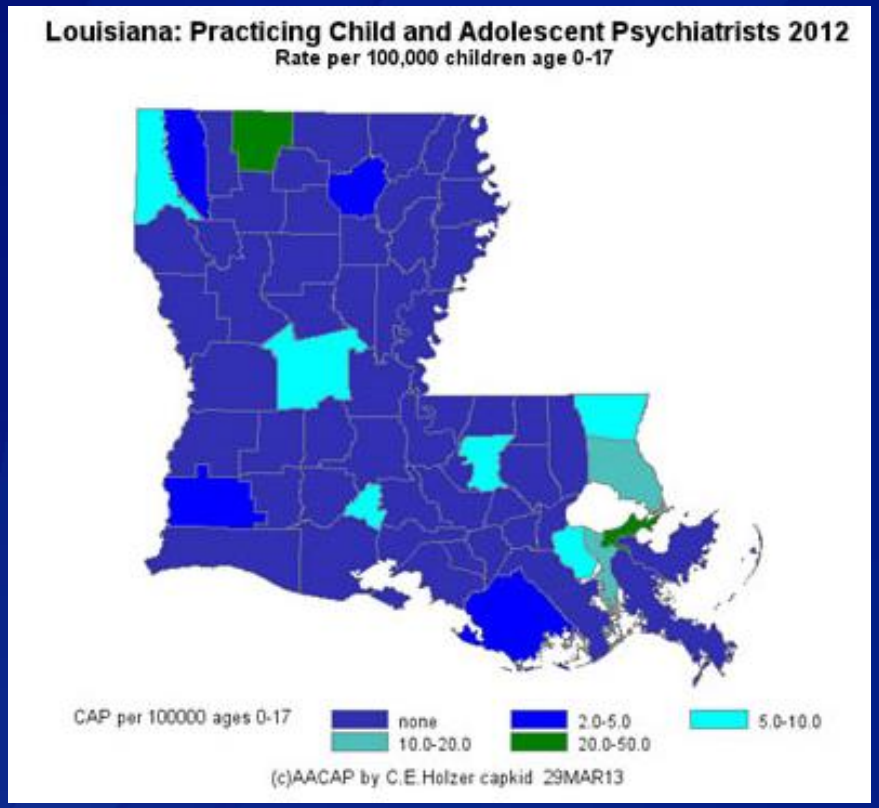


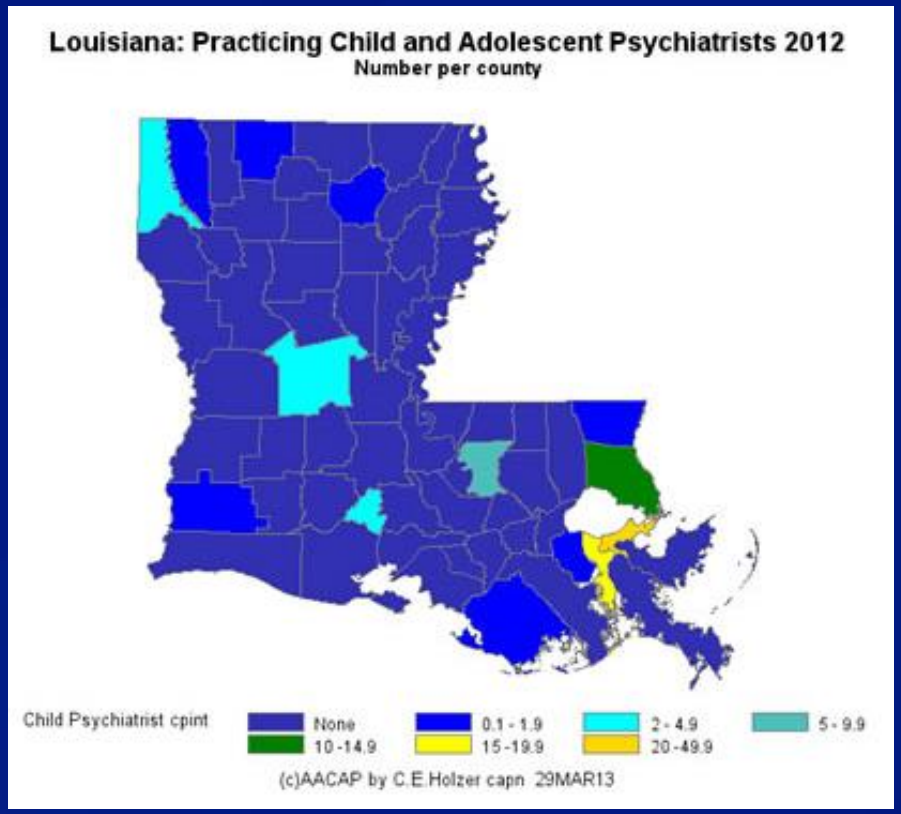
http://www.bls.gov/oes/current/oes291066.htm



http://www.bls.gov/oes/current/oes291066.htm

Practicing Child and Adolescent Psychiatrists in LA: 2012





POLICY, PRACTICE, AND PROGRAM

Opportunities to Guide Clinical Practice and Family Choice

Improving the Alignment between Current & Best Practice for ADHD among Young Children

Children Under 6 are Diagnosed with ADHD by Clinicians

Strategies

CONTEXT

- Health Care Practitioner Knowledge, Behavior, & Preferences
- Family Barriers
- Infrastructure Deficits
- Reimbursement Barriers

STRATEGIES

Characterize and Address Gaps in HCP Knowledge, Behavior, and Preferences	Characterize and Address Family Barriers	Characterize and Address Infrastructure Deficits	Characterize and Address Reimbursement Barriers
What can we learn from other practice change initiatives to speed uptake?	*How can we effectively change family KAPs for the better?*	*Who can address these constraints? What models show success?*	*What incentive strategies facilitate the right treatment?*

First-Line Treatment is Delivered to Young Children Diagnosed with ADHD

Enabling Support

Identify and Address Other Barriers | Population-based Research and Surveillance | Program Management | Stakeholder Engagement

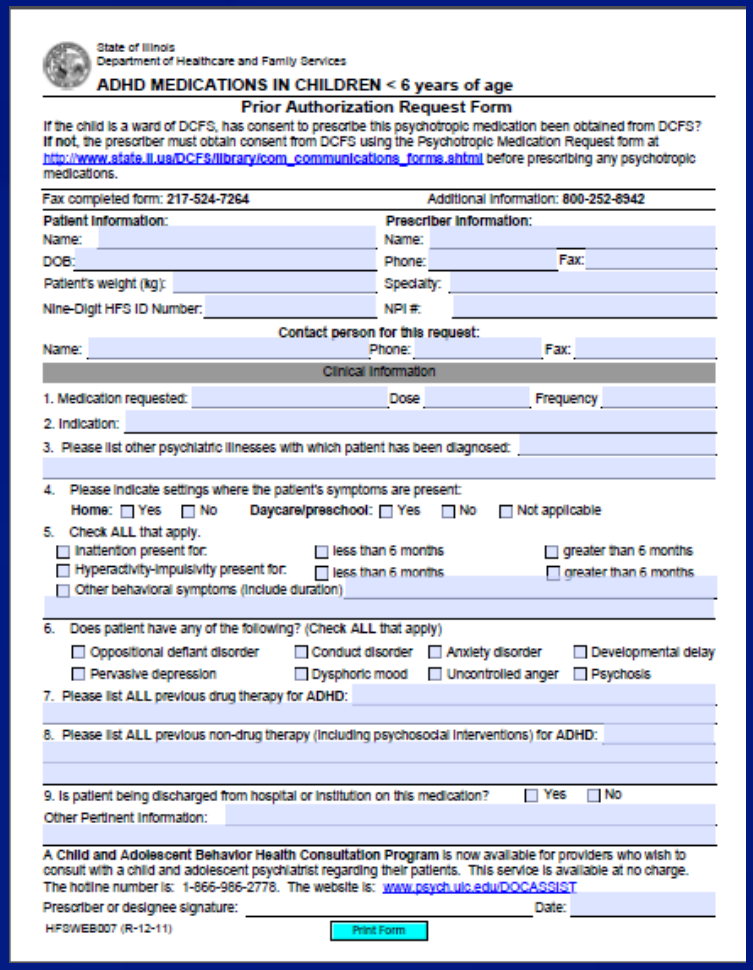
Policy as an Impetus for a Change in Clinical Practice

- **State Policies and Programs to Address Psychotropic Medication Use in Children – Foster Care Focus***
  - Additional justification required when prescribing psychotropics for young children
  - Preauthorization and peer-review for prescriptions for psychotropic medication in a young child
  - Psychiatric consultation lines to assist physicians in making referrals
  - Data registries that can be used to provide physician feedback and training
  - Preferred drug lists

* http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Prescription-Drugs/Downloads/CIB-Posting.pdf

Policy as an Impetus for a Change in Clinical Practice

- **State Policies to Address ADHD Medication Treatment in Young Children**
  - Preferred drug lists – consideration of FDA approvals (AMP formulations) and best practice guidelines (MPH formulations)
  - Preauthorization and manual peer-review for prescribing ADHD medications in those under 6
  - Requirements of psychosocial evaluation and non-med therapies tried *first*



State of Illinois
Department of Healthcare and Family Services

ADHD MEDICATIONS IN CHILDREN < 6 years of age

Prior Authorization Request Form

If the child is a ward of DCFS, has consent to prescribe this psychotropic medication been obtained from DCFS? If not, the prescriber must obtain consent from DCFS using the Psychotropic Medication Request form at http://www.state.il.us/DCFS/library/com_communications_forms.shtml before prescribing any psychotropic medications.

Fax completed form: **217-524-7264** Additional information: **800-252-8942**

Patient Information:
Name:
DOB:
Patient's weight (kg):
Nine-Digit HFS ID Number:

Prescriber Information:
Name:
Phone: Fax:
Specialty:
NPI #:

Contact person for this request:
Name: Phone: Fax:

Clinical Information

1. Medication requested: Dose Frequency
2. Indication:
3. Please list other psychiatric illnesses with which patient has been diagnosed:
4. Please indicate settings where the patient's symptoms are present:
   Home: ☐ Yes ☐ No **Daycare/preschool:** ☐ Yes ☐ No ☐ Not applicable
5. Check **ALL** that apply.
   ☐ Inattention present for: ☐ less than 6 months ☐ greater than 6 months
   ☐ Hyperactivity-Impulsivity present for: ☐ less than 6 months ☐ greater than 6 months
   ☐ Other behavioral symptoms (include duration)
6. Does patient have any of the following? (Check **ALL** that apply)
   ☐ Oppositional defiant disorder ☐ Conduct disorder ☐ Anxiety disorder ☐ Developmental delay
   ☐ Pervasive depression ☐ Dysphoric mood ☐ Uncontrolled anger ☐ Psychosis
7. Please list **ALL** previous drug therapy for **ADHD**:
8. Please list **ALL** previous non-drug therapy (including psychosocial interventions) for **ADHD**:
9. Is patient being discharged from hospital or institution on this medication? ☐ Yes ☐ No

Other Pertinent Information:

A Child and Adolescent Behavior Health Consultation Program is now available for providers who wish to consult with a child and adolescent psychiatrist regarding their patients. This service is available at no charge. The hotline number is: 1-866-986-2778. The website is: www.psych.uic.edu/DOCASSIST

Prescriber or designee signature: Date:

HFSWEB007 (R-12-11) Print Form

Quick Reference Drug List

ADHD

US Script Contact Information: Prior Authorization Phone: 1-866-399-0928
Prior Authorization Fax: 1-866-399-0929
Clinical Hours: Monday – Friday
10:00am – 8:00pm EST

Peach State Contact Information: Provider Inquiry Phone: 1-866-874-0633

Key: * = Generic product available

NOTE: These medications are covered without prior authorization for members between ages 3-18, unless otherwise noted.

Drug	Dosage Form	Medicaid PDL Status	Medicare Advantage Formulary Status
Amphetamines			
amphetamine/ dextroamphetamine mix* (Adderall®)	Tabs: 5mg, 7.5mg, 10mg, 12.5mg, 15mg, 20mg, 30mg	Yes	Yes
amphetamine/ dextroamphetamine ER mix* (Adderall XR®)	XR caps: 5mg, 10mg, 15mg, 20mg, 25mg, 30mg	Yes – Brand only Age limit – allowed for children over 6 years old	Yes – Brand only
dextroamphetamine* (Dexedrine®)	Tabs: 5mg, 10mg Caps ER: 5mg, 10mg, 15mg	Yes	Yes – except ER caps
methamphetamine* (Desoxyn®)	Tabs: 5mg	No	No
Vyvanse® (lisdexamfetamine)	Caps: 20mg, 30mg, 40mg, 50mg, 60mg, 70mg	No	No

https://dch.georgia.gov/sites/dch.georgia.gov/files/related_files/document/PDL%20by%20Drug%20Name%20-%20Effective%20%201.1.14.pdf

Arizona Department of Health Services

Prior Authorization Guidelines

ADHD Medications in Children Under 6 Years Old

FDA Approved Indication:
Treatment of Attention Deficit Hyperactivity Disorder (ADHD)

Guidelines for Approval:

1. The requesting clinician has documented that the child has a diagnosis of ADHD
2. Psychosocial issues and non-medical interventions are being addressed by the clinical team.
3. Documentation of psychosocial evaluation occurring before request for ADHD medications.
4. Documentation of non-medication alternatives that have been attempted before request for ADHD medications.

Additional Requirements:
Children under 6 years old will be monitored in accordance with the ADHS/DBHS Clinical Practice Protocol on Psychiatric Best Practice Guidelines for Children: Birth to Five Years of Age.

Coverage is Not Authorized for:

1. Indications other than ADHD.
2. Doses greater than FDA recommended maximum daily dosage.

References:

1. ADHS/DBHS: Provider Manual Section 3.15: Psychotropic Medication: Prescribing and Monitoring
2. Manufacturer Product Information
3. Pliska SR, Greenhill LL, Crismon ML, et al. The Texas children's medication algorithm project: report of the Texas census conference panel on medication treatment of childhood deficit/hyperactivity disorder. Part 1. J Am Academy Child Adolescent Psychology. 200;39(7):920-927

http://www.azdhs.gov/bhs/documents/drug-list-prior-authorization-guidelines/stimulants-children.pdf

The Role of Insurers in Changing Clinical Practice

- **Steps taken by Insurance Companies (select)**
  - Alerts for:
    - 1+ psychotropic medications (including ADHD meds) for a child <6
    - 2+ psychotropic medications (including ADHD meds) for any child
    - 3+ psychotropic medications (including ADHD meds) for any child
    - 2+ prescribers prescribing the same psychotropic medication
    - High doses of ADHD medications
  - Targeted communication:
    - Physicians associated with the alerts above
    - Dissemination of ADHD guidelines, sometimes targeted to those treating young children

Importance of Policy Evaluation alongside Policy Intervention

"One of the great mistakes is to judge policies and programs by their intentions rather than their results."

Milton Friedman

Image by Roger Ressmeyer/CORBIS Roger Ressmeyer/Corbis
http://www.theguardian.com/commentisfree/2013/aug/13/rand-paul-milton-friedman-federal-reserve-chairman

Contact Information

www.cdc.gov/ADHD

Susanna Visser, DrPH

svisser@cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.